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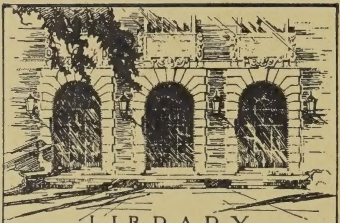

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# SAN DIEGO STATE COLLEGE

## BULLETIN

## *Circular of Information*

## ANNOUNCEMENT OF COURSES

THE GREAT SEAL OF THE STATE OF CALIFORNIA

FOR THE YEAR 1944-1945

## STATE DEPARTMENT OF EDUCATION

| | |
|---|---|
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| J. A. Burkman | Assistant Director of Education |

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# BULLETIN AND ANNOUNCEMENT OF COURSES

VOLUME 31
JUNE, 1944

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JUN 1 - 1944
UNIVERSITY OF ILLINOIS

## SAN DIEGO STATE COLLEGE
SAN DIEGO, CALIFORNIA

*printed in* CALIFORNIA STATE PRINTING OFFICE
SACRAMENTO, *1944* GEORGE H. MOORE, STATE PRINTER

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## *1944*

### JULY

| S | M | T | W | T | F | S |
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### SEPTEMBER

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### NOVEMBER

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## *1945*

### JANUARY

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### FEBRUARY

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### MARCH

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### APRIL

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### MAY

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### JUNE

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### JULY

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### AUGUST

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### SEPTEMBER

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### OCTOBER

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### NOVEMBER

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### DECEMBER

| S | M | T | W | T | F | S |
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| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | -- | -- | -- | -- | -- |

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# CALENDAR 1944-1945

### SUMMER SESSION, 1944.

Term I, six weeks, June 26-August 4.
Term II, three weeks, August 7-August 25.

### FALL SEMESTER, 1944-1945.

| | | |
|---|---|---|
| September 1 | Applications for admission must be filed on or before this date. | |
| September 5 | Entrance examinations for all entering Freshmen who have not previously taken these examinations. No Freshman will be granted admission until these examinations have been taken. | |
| September 8 | Orientation Program. All entering Freshmen must appear on the campus for this program, beginning at 8 a.m. and lasting throughout the entire day. | |
| | 8:30 a.m.-12:00 m. | Fundamentals Tests—Required for admission to Teacher Education. Should be taken at the end of the first semester of the Freshman year where possible. |
| | 1:00-2:30 p.m. | College Aptitude Test for students entering with advanced standing. |
| September 11 | Registration and payment of fees. | |
| September 12 | Instruction begins. Late registration fee becomes effective. | |
| November 23-24 | Thanksgiving Recess. | |
| December 8 | Last day before Christmas Recess begins. | |
| January 2 | Classwork resumes. | |
| January 25-31 | Semester Examinations. | |

### SPRING SEMESTER, 1944-1945.

| | | |
|---|---|---|
| January 25 | Applications for admission must be filed on or before this date. | |
| February 2 | Orientation Program. All entering Freshmen must appear on the campus for this program, beginning at 8 a.m. and lasting throughout the entire day. | |
| | 8:30 a.m.-12:00 m. | Fundamentals Tests—Required for admission to Teacher Education. Should be taken at the end of the first semester of the Freshman year where possible. |
| | 1:00-2:30 p.m. | College Aptitude Test for students entering with advanced standing. |
| February 5 | Registration and payment of fees. | |
| February 6 | Instruction begins. Late registration fee becomes effective. | |
| March 26-30 | Spring Recess. | |
| May 30 | Memorial Day Holiday. | |
| June 7-13 | Semester Examinations. | |
| June 15 | Annual Commencement. | |

### SUMMER SESSION, 1945.

Term I, June 25-August 3.
Term II, August 6-24.

# FUNCTIONS OF THE STATE COLLEGES OF CALIFORNIA

The State Colleges have three major functions, namely, (1) to help the individual student to develop a well-rounded and adjusted personality; (2) to promote civic intelligence and competence; and (3) to create supplies of trained men and women, some to serve as teachers in the elementary and secondary schools, some to fill intermediate places of leadership, and some to transfer to graduate institutions to equip themselves to extend the frontiers of knowledge and to occupy the higher positions of leadership. In terms of publicly supported higher education, the State Colleges and the University together make provision for the realization of all the essential objectives of higher education in our State.

To achieve their unique purposes the State Colleges have developed and are improving offerings as follows:

1. Teacher education curricula for those students who plan to teach in the elementary school, the junior high school, and in the special fields in all secondary schools.
2. Preprofessional curricula.
3. Curricula of varying lengths in such fields as business, industry, governmental services, homemaking, and social service.
4. General education for students who take work which leads toward the bachelor of arts degree or to the higher professions through graduate work.
5. Guidance services to assist the individual student to plan his educational program and to make his college and life adjustments.
6. Extension courses in appropriate fields.

The State Colleges accept the principle that higher education should be available to all capable high school graduates. The preservation and improvement of democracy depends upon the full and unhampered development of all potential citizenship and leadership resources. In keeping with this principle the State Colleges maintain flexible entrance requirements. Each applicant is treated individually in terms of his potential capacity and his potential contribution and not in terms of past academic pattern or accomplishment alone.

The State Colleges purposely maintain not only flexible entrance requirements, but also, adjustive curricula, and adequate and effective guidance and counseling services to promote the personal and educational development of worthy students. The State Colleges modify traditional academic restrictions and provide new curricula and services whenever such modifications and additions seem to serve the legitimate desirable needs of individuals and society.

The promotion of civic intelligence and competence is the underlying aim of all activities on State College campuses. Special emphasis centers on warm personal relationships between instructors and students, on friendly counsel in time of need, and on the day-to-day routine of living in a friendly atmosphere. Because the majority of State College students live at home, it is possible to link together the college, the home, and the community in realistic democratic relationships.

The democratic controls exercised over the State Colleges make them readily and effectively responsive to individual and community needs and encourage them continuously to make significant improvements in both curriculum and personal services. The State Colleges are thus laboratories in which the facts and theories developed in research, in community living, and in daily association with students are reflected in the instructional program.

The State Colleges plan their program of higher education so as to provide educational services inherent in the principle of equality of opportunity.

# THE COLLEGE

## Location and Environment

Renowned as a winter resort with a mild but invigorating climate, San Diego has become equally famous for its cool summers. High cultural standards in art, music, literature, and science create a stimulating environment for a college. Many of these advantages are to be found in the heritage resulting from the expositions of 1915-16 and 1935-36, including the buildings themselves, which portray the best types of Spanish colonial art and architecture. Housed in these buildings are the Fine Arts Gallery, exhibits in anthropology, natural history, and American archaeology, which are in many respects unsurpassed. The outdoor organ, the Ford Bowl, and the horticultural gardens make Balboa Park, in which all these facilities are located, world renowned. The Scripps Institute of Oceanography, operated by the University of California at La Jolla, gives opportunity for important cooperation in the biological sciences.

## Buildings and Equipment

On February 1, 1931, the college was moved to the new campus, located one mile north of the city's principal east-west boulevard, El Cajon Avenue. The buildings are of Spanish-Moorish architecture which is well suited to the landscape and climate of this region. They include the Academic Building (which houses lecture halls, classrooms and administrative offices) ; the Science Building; the Library, the Little Theater; the Music Building; the Campus Elementary School; Scripps Cottage (a social clubhouse for women students) ; the Cafe and Book Store; and the Physical Education Building (a structure with adequate facilities for both men and women). The gymnasium contains a very fine basketball floor with stands that will accommodate 1500 spectators. A fine concrete stadium, constructed in a natural site, has a seating capacity that is adequate for preesnt needs. The open air theater, seating 4200 persons, serves as a meeting place for large groups.

## Facilities for the Education of Teachers

The college maintains a modern elementary school on the campus where it has developed an extensive program for the education of elementary school teachers. The classroom-laboratory plan which calls for the use of work-rooms, the library, and shops, affords unusual opportunities for the induction of students into teaching. By arrangement with the San Diego City Schools, directed teaching is provided in the Euclid elementary school for one-half day throughout a semester. A similar arrangement exists at the Woodrow Wilson Junior High School for students who are preparing to teach junior high and special secondary school subjects. Students preparing to teach only special secondary school subjects may be assigned to one of the senior high schools.

## The Library

The library facilities of this college are noteworthy for an institution of its size. The library consists of well over 80,000 volumes selected to meet the requirements of a modern educational institution. Six professionally trained librarians are available to render assistance to students in their reading and reference work.

For the duration of the war the library service has been further augmented by the loan of a librarian and three special libraries, namely, a collection of 3,000 volumes on Anthropology and Ethnology from the San Diego Museum of Man, the U. S. Grant Memorial Library of 1,375 volumes, and the 25,000 volume Scientific Library of the San Diego Society of Natural History.

The Campus Elementary School Library, representing a collection of 11,000 volumes, possesses equipment and building facilities that are unique.

## Living Accommodations

The college does not maintain dormitories since nearly all of the students live with parents or guardians. Living arrangements for students whose homes are not in San Diego or within commuting distance are made through the offices of the Dean of Women or the Dean of Men. All women students are urged to live in the residence hall adjoining the campus. Careful consideration is given to study conditions, healthful living, and adequate social opportunities. Room and board may be secured for approximately $200 per semester, payable in four installments. Opportunities to reduce this figure by working a few hours each week are occasionally available. Reservations should be made in advance through the Manager of Quetzal Hall, 5192 College Avenue, San Diego 5, California. Where students find other accommodations more desirable, written permission from parents must be secured and filed with the Dean of Women or Dean of Men.

## Student Life

A rich field of extra-curricular activities is available to the student throughout his college life. The student is urged to select these activities carefully in order that he may profit by these extra-class experiences without lowering his standards of scholarship. The *Student Handbook*, available at the time of registration, gives information concerning activities which include organizations in every department of the college, and opportunities for individual and group experience in the social, athletic, fraternal, religious and governmental life of the campus.

## Student Health Service

The Health Department is maintained for the protection and care of student health. A complete physical examination is required of each student upon admission to college. Careful attention is given to cases undergoing remedial treatment or to cases in which a modification of study load or in the amount of participation in physical activities seem advisable.

A representative of the Health Department is available a part of each day for consultation and emergency treatment. Students who have been absent because of illness should receive clearance from the Health Department before returning to classes.

A group plan for accident insurance is in operation for students who desire to participate.

## Placement Service

A Placement Office is maintained by the college, which serves as a clearing house for part time and full time jobs. Employers notify this office of available openings in their organizations, and also turn to the office for information concerning graduates or nongraduates whom they are considering for employment.

Included in the service of the office are the listing of part time jobs of all types available, including opportunities to work for board and room, teacher placement, and full time jobs in commerce and industry.

This service is free to students, who are invited to arrange for interviews with members of the placement staff if in need of assistance in finding work. Students who know of jobs in which they are not themselves interested are encouraged to notify the office of such vacancies.

The Placement Secretary should be seen or called regarding vacancies or work applications.

## Vocational Rehabilitation Service

The Bureau of Vocational Rehabilitation, California State Department of Education, offers its service to students who have an employment handicap resulting from physical disability of any kind. Included are vocational counselling, the payment of tuition and fee, and the providing of textbooks without charge to the trainee. Details of the service may be obtained from the Dean of the College of Liberal Arts.

# FEES AND EXPENSES

## Probable Expenses for One Semester

An estimate of the expense of attendance for one semester is given below. No estimate is made as to the cost of clothing, or other personal items, since these figures vary with the demands of the individual. Laboratory fees are additional.

### A Partial Estimate of Expenses

One Semester

| | Average | *Minimum* | *Maximum* |
|---|---|---|---|
| Fees and Deposits | | $20.00 | $27.50 |
| Books | | 12.00 | 20.00 |
| Board and Room | | 200.00 | ----- |
| Incidentals: | | | |
| Transportation | | 10.00 | 20.00 |
| Lunches (daily in cafe) | | 35.00 | 50.00 |
| Organizations: | *Average* | | |
| Fraternity | | | |
| Initiation and pin | $16.50 | $7.50 | $25.00 |
| Dues and Assessments | 5.50 | | |
| Sorority | | | |
| Initiation and pin | 16.00 | 16.75 | 25.00 |
| Dues and Assessments | 8.00 | | |
| Miscellaneous | | | 5.00 |

Before enrolling in college, the student should possess sufficient resources to meet the minimum expenses for one semester. A limited amount of clerical work in offices and in the library may be offered from time to time, but ordinarily it is not sufficiently remunerative to reduce expenses materially.

## [1]List of Fees and Deposits (Subject to Revision)

### ENROLLMENT FEES AND DEPOSITS

PAYABLE AT TIME OF REGISTRATION

| | |
|---|---|
| By all students: | |
| Tuition: | |
| Regular students (carrying over 5 units) | $6.50 |
| Limited students (carrying 5 units or less) per unit | 2.50 |
| Materials and service: | |
| Regular students | 4.00 |
| Limited students per unit | .50 |
| General service deposit (unexpended portion is refunded) | 3.00 |
| Personnel examination (new students only)<br>(Limited students and graduate students exempted) | 2.00 |
| [2] Student activity fees: | |
| Regular students | 6.00 |
| Limited students | 2.00 |

---

[1] Auditors pay same fees as students enrolled for credit.
[2] Not required by the State.

## MISCELLANEOUS FEES AND DEPOSITS

### DEPOSITS PAYABLE BEFORE LABORATORY WORK IS STARTED

| | |
|---|---|
| Chemistry | $5.00 |
| Geology 21A-21B | 1.00 |

### FEES PAYABLE WHEN SERVICE IS RENDERED

| | |
|---|---|
| Change of program | .50 |
| College Bulletin (free to prospective students) | .20 |
| Duplicate library card | .10 |
| Duplicate registration book | .10 |
| [1] Evaluation of records for advanced standing | 2.00 |
| Fundamentals test | .50 |
| Late filing of registration book | 1.00 |
| Late registration | 1.00 |
| [2] Transcript of record (1st copy free) | .50 |

## GRADUATION FEES

| | |
|---|---|
| State Teaching Credentials (each credential) | $3.00 |
| Kindergarten-Primary<br>General elementary<br>General Junior High<br>Special secondary<br>School administration | |
| Diploma | $1.00 |

The credential fee is collected through the college by cashier's check or post office money order made payable to the State Department of Education.

---

[1] Paid by all students entering with advanced standing.

[2] The 50-cent fee must accompany each application for a transcript of record. Ten cents will be charged for each duplicate of this record which accompanies the original.

# ADMISSION AND REGISTRATION

## General Admission Requirements

High school graduates and other applicants possessing equivalent preparation may be admitted to this college upon evidence of fitness to profit by college instruction, such fitness to be shown by previous scholastic records, by evidence of good moral character and personal qualifications, and by satisfactory scores on tests which the college may require.

**Admission of High School Graduates.** (1) A high school transcript must be presented showing satisfactory scholarship, and (2) applicants must demonstrate readiness for college instruction by making satisfactory scores on such tests as the college may designate.

Students will be granted *regular* status if they have earned recommended grades * in not less than 16 semester courses in English, Social Sciences, Foreign Language, Mathematics, Natural Sciences, and related fields, during the tenth, eleventh, and twelfth years in high school.

Provisional *regular* status will be granted if the student has earned recommended grades * in not less than 12 semester courses in the above subjects. The student will attain full regular status at the end of the first semester in college if a scholarship average of C or better is maintained in at least 12 units of work. Failure to secure a C average will disqualify the student for further attendance.

Students who do not qualify for *regular* (provisional) status may enroll in one of the two-year curricula if they have earned recommended grades * in at least 12 semester courses during the tenth, eleventh, and twelfth years in high school. Individuals who fall slightly below this standard may be admitted to the two-year curricula if qualifying examination scores indicate probable success in these courses.

**Admission by Examination.** Certificates of successful examination before the College Entrance Examination Board will be accepted when candidates can not meet the above scholarship requirements.

**Admission With Advanced Standing.** Credit earned in recognized institutions of collegiate grade will be evaluated and advanced standing allowed accordingly toward the graduation requirements of this institution. Applicants must show an average grade of C or better for all college work, for the last college attended, and for the last semester of attendance in order to qualify for regular status. A student who enters with advanced standing is one who has completed at least 15 units of passing work in another collegiate institution. However, no applicant may disregard his collegiate record and apply for admission only on a basis of his high school work. Not more than 64 semester hours of junior college work may be allowed for credit.

Students seeking admission with advanced standing must furnish complete transcripts for all work attempted beyond the eighth grade. A $2 evaluation deposit must accompany the application for admission. This deposit will be refunded if the student enrolls at the next regular registration period.

**Special Students.** Persons over 21 years of age may be admitted on the basis of maturity, provided they present satisfactory evidence of good character and intelligence. Full matriculation will be granted only upon removal of all entrance deficiencies, and the completion of a full semester of satisfactory college work.

**Auditors.** Properly qualified persons may apply for admission to attend classes as auditors. Such students pay the same fees as those who take equivalent work for credit.

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* Grades of A or B.

## Registration

Registration date for new students for the fall semester of 1944-1945 is September 8 and for the spring semester it is February 2. An application blank should be secured from the Registrar and filed, with complete transcripts of record, at least two weeks prior to registration date.

The college year is divided into fall and spring semesters of eighteen weeks each, followed by a summer session consisting of two terms of six weeks and three weeks, respectively. Students may enter at the beginning of either semester or either term of the summer session.

The summer session meets the needs of students who wish to secure supplemental credit or to shorten the time for completion of their college course, and of teachers in service.

## Tests Required at Registration Time and Later

1. A physical examination is required of all students upon entering the college. Appointments for this examination are made during the orientation program.

2. All entering students are required to take the College Aptitude Test. Exceptions may be made for graduate students and for those who register for five units or less.

3. All college transfer students who present less than a minimum of 15 units of college credit must take a High School Achievement Examination, and a standard English Examination in addition to the College Aptitude Test. Students whose tests indicate that they are not qualified for the regular English 1B must take English L1A or L1AA. Exceptions may be made for students transferring English credit from other colleges.

4. Passing the Fundamentals Test in reading, spelling, arithmetic and handwriting, and a Speech Test, are prerequisites for admission to upper division courses in teacher education curricula. These tests should be taken at the beginning of the second semester of the freshman year, in order that deficiencies, if any, may be made up before applying for admission to the upper division of teacher education curricula. Exceptions may be made for graduates of California State teacher education institutions who have been teachers in service.

## Late Registration

Students who register after the first week of the semester are subject to a limitation of program and must secure the approval of instructors for late admission to classes. After registration day a fee of $1 is charged for late registration.

## Changes in Registration

Petitions for changes in program may be secured at the Registrar's office. A small fee is charged for changes in program after registration books are filed.

## Loans and Scholarships

Scholarships for both men and women have been made available through the efforts of alumni, patrons of the college, and civic organizations. Superiority in scholarship and worthiness from the point of view of need are the standards upon which selection is based. Scholarship aid is therefore restricted for the most part to students who have completed the lower division of the college.

Both long and short term loans are available to students who have been in attendance for at least one year and who have given evidence of ability to do satisfactory college work. Application for loans is made to the Committee on Loans and Scholarships through the office of the Dean of Men or Dean of Women.

# GENERAL REGULATIONS

## Officers for Consultation

Concerning the housing and living arrangements of students, personal problems, etc.—The Dean of Women; The Dean of Men.

Concerning the scheduling and arrangement for all student social affairs—The Dean of Women.

Concerning study lists and personal problems of *two-year students*—Director of Guidance for Two-Year Students.

Concerning admission, program of studies, credits, degree requirements, etc.—The Registrar; The Dean of Liberal Arts; The Dean of Education.

Concerning health and physical condition—The Health Department.

Concerning student-body affairs, student-body policy—The executive officers of the student body; The Dean of Liberal Arts.

Concerning appointments to teaching positions and other types of full and part time employment—The Placement Secretary.

Concerning admission to Teacher Education Curriculum, directed teaching, credential requirements, etc.—The Dean of Education.

Concerning use of the buildings—The Dean of Women; The Dean of Men.

Concerning entrance requirements and offerings at other institutions—The Registrar; The Dean of Liberal Arts; The Dean of Education.

## Classification

**Full time Students** are those who are registered in more than 5 units of work. They are expected to carry a minimum of 12 units unless excused.

**Limited Students** are those who, for acceptable reasons, have been permitted to register for 5 or fewer units of work.

**Adult Special Students** are mature students who have not satisfied all entrance requirements, but who have been permitted to register for such courses as their ability and preparation justify. Special students may also be limited students.

**Regular Students** are those who are qualified to enroll in curricula leading to the Bachelor of Arts degree.

**Regular-provisional Students** are those whose high school records are slightly deficient in recommended grades. They are permitted to enroll on trial for one semester in a regular curriculum. If they make a C average in 12 or more units they automatically attain regular status.

**Two-Year Students** are those who do not qualify for regular status because of deficiencies in high school scholarship, but who have been permitted to enroll in an adjustive curriculum. These students are not permitted to enroll in courses applying regularly toward the Bachelor of Arts degree except by permission of their adviser until they have earned regular status through satisfactory scholarship.

**Class.** Students who have completed 0 to 29 units of work are classified as freshmen; 30 to 59 units as sophomores; 60 to 89 units as juniors; and 90 or more as seniors.

## Scholarship, Grades, and Grade Points

The following grades are used in reporting the standing of students at the end of each semester: A, excellent; B, good; C, fair; D, passed; E, conditioned; F, failed; I, incomplete, and W, withdrawn.

The grade E is recorded for work which is of low order but which may be made passable. If the work is raised to passing level by the close of the next semester, the grade is changed to D; otherwise it is changed automatically to F.

The grade I is recorded for work of high order but which is incomplete for an acceptable reason. To change an I to another grade, the work must be completed within the next semester; otherwise it is changed to F.

Grade points are assigned as follows: Grade A, 3 points per unit; B, 2 points per unit; C, 1 point per unit; D, no points; E, minus 1 point per unit; F, minus 1 point per unit. The number of grade points a student has earned in a subject is determined by multiplying the number of points he has received by the number of units allowed. The grade point average is determined by dividing the grade points earned by the number of units attempted. Courses in which the student received an I or Cr. or W are disregarded in computing grade point averages. A student must earn at least a C average in all work undertaken at the college to qualify for a diploma or a transcript of record with recommendation to another collegiate institution.

## Units of Work, and Study Lists Limits

A unit of credit represents one hour of lecture or recitation combined with two hours of preparation per week through one semester, or three hours of laboratory or field work in the case of laboratory credit.

Students are not ordinarily permitted to enroll for more than 16 units* for credit toward graduation. This constitutes a normal semester's program.
Certain exceptions to this rule exist. If during the preceding semester the student has carried at least 12 units*: (1) if a grade point average of at least 1.5 was earned, 17 units * may be carried for credit toward graduation, and (2) if a grade point average of 2.0 (B) was earned, 18 units * may be carried.

Any course in which a passing grade is earned may be used in satisfying pattern requirements, even though credit for the course is in excess of the units which may be credited for graduation.
Exceptions to the above regulations may be secured only through a petition to the Scholarship Committee.

No student may register for less than 12 units without the approval of the Dean of Liberal Arts or the Dean of Education.

## Probation and Disqualification

**Probation.** Any student whose scholarship record shows a cumulative deficit of 12 or more grade points below a *C* average for all work undertaken in the college will be placed on probation. A limited student will be placed on probation if his cumulative deficit below a *C* average equals or exceeds the average number of units carried per semester. Probationary status may be continued provided that the student does not add further toward his grade point deficiency.

**Disqualification.** Any probational student whose scholarship falls below an average grade of *C* in any single semester is disqualified for further attendance at the college. A scholarship record below a *D* average for any single semester also disqualifies a student.

A disqualified student may be reinstated after an interval of one semester for reasons satisfactory to the Executive Committee of the Faculty. All applications for reinstatement must be in writing.

## Withdrawals from Class

Forms for withdrawal from class may be obtained at the Registrar's office. If a student withdraws from class during the first seven weeks of a semester, a grade of *W* will be recorded upon his permanent record for each class which he has dropped. If he withdraws during the remainder of the semester, either an *I* or an *F* will be recorded unless a grade of *W* is approved by the instructor and the proper dean. A grade of *I* automatically becomes an *F* unless the work is completed by the end of the next semester.

Students who withdraw from all classes during a semester must petition the Admissions Committee for readmission.

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* In addition to required physical education courses.

## Transcripts of Record

Students may secure one transcript of record without fee. Thereafter, each request for transcript should be accompanied by the fee of fifty cents. Once a student has matriculated in this college, transcripts from other schools will not be returned, or copies of them made. No fees are charged for transcripts required for military purposes.

Transcripts in the possession of students are to be regarded as unofficial records.

## Eligibility for Directed Teaching

No student shall be eligible for directed teaching (Education 116) who has not completed 75 units, been admitted to Teacher Education, and whose entire record, as well as his record for the preceding semester, does not average at least a 1.2 grade.

## The Honors Group

All students who at the end of the Sophomore year have attained a grade-point average of 2.5, and such others as have attained a high average in the department in which their Major is selected, and who have received the recommendation of that department and the consent of the Committee on Honors, may if they so elect, constitute an honors group, for special treatment in their Major subject.

Such students, so far as the facilities of the department and the best interests of the students under its charge allow, shall be treated as befits their individual needs and as their individual capacities warrant. They shall be eligible to enroll in honors or special study courses, although credit in such courses shall be limited to 5 units a semester. They shall not be held to regular attendance in the established courses of their departments if, in the opinion of the instructor, the course requirements can be met through special assignments and examinations or by satisfactory performance in the regular examinations in the course. With the consent of the major department, requirements concerning minors and specific courses or sequences in the major may be set aside. Each honor student shall be assigned to a member of his Major department for advice and direction.

Students in the honors group who fail to take advantage of the opportunities there offered may at the end of any semester be transferred by the department to the general course. Students in the general course who show unusual capacity, upon recommendation of the department and the Committee on Honors, may at the end of any semester, be transferred to the honors group if such transfer appears practicable.

*Students who wish to apply for entrance in the Honors Group may do so by filling out cards to be obtained from their major departments. The applications should be filed with the chairman of the major department not later than a week after registration opens. Units earned by students doing individual study under this plan will be recorded under the symbol 166 and will be subject to the formulated rules dealing with limitations of student load.*

## The Degree with Honors and with Distinction

Upon recommendation of the Committee on Honors, graduation with honors shall be granted to the upper 10 per cent of the graduating class. Each department shall determine which students it will recommend for Distinction in the major field at graduation, and report its recommendation to the Committee on Honors for transmission to the faculty.

## Examinations

No final examinations shall be given to individual students before the regular time. Any student who finds it impossible to take a final examinaton on the date scheduled must make arrangements with the instructor to have an incomplete grade reported and must take the deferred final examination not later than the end of the first semester following that in which the incomplete was given. No exceptions shall be made to this rule without the approval of an academic dean and the instructor concerned.

All final examinations shall be written in official examination books or other forms which shall be furnished by the college and distributed by the instructor at the beginning of the examination period. No books or papers of any kind shall be brought into the examination room, except by special order of the instructor.

## Extension Courses

An extension program covering a wide range of offerings is made available each semester. Members of the regular college faculty and others expert in special fields instruct extension classes. The extension program is designed to serve the needs of San Diego and neighboring communities for courses on the college level that are not available on the campus, or that should be offered at times and places more convenient to special groups. Extension courses are considered the equivalent of campus courses and the amount of credit available to any one student in one semester through extension courses or a combination of campus and extension courses is subject to the same study-load limitations that apply to students regularly enrolled for campus courses. Fees for extension courses vary somewhat with the place where the instruction is offered, but will not exceed $6 per unit for the year 1944-1945.

Information concerning extension offerings may be obtained on application to the Director of Extension Service.

The amount of credit for extension and correspondence courses acceptable in fulfillment of the requirements for the Bachelor of Arts degree will depend upon the nature of the courses, the quality of the work done, and the student's preparation for work in the field of the course. The college reserves the right to limit credit to such courses as have been approved, and the total of such acceptable credit to 12 units.

# THE BACHELOR OF ARTS DEGREE

## General Requirements for the Bachelor of Arts Degree

San Diego State College offers the following types of curricula leading to the A.B. degree: (1) the curricula leading to the California teaching credentials, and (2) the Liberal Arts curricula. With slight variations in definition, many of the basic requirements are the same.

A minimum of 120 units of college work, representing a four-year course, is required for the Bachelor of Arts degree. At least 30 units must be earned in this college, and not less than 24 of these residence units must ordinarily be taken with the rank of senior. Not fewer than 12 units of this work must be completed during a single semester; or in lieu of this at least 16 units must be completed in not less than two consecutive summer sessions. At least a *C* average in scholarship must be maintained in the major and in all work applied toward the degree.

**Credit Granted for Military Service.** Six units of elective credit will be granted to students who have enlisted in the armed services of this country upon the completion of the prescribed basic training program. Documentary evidence bearing the signature of the proper commanding officer must be filed before credit will be accorded to the student.

Nine additional units of credit will be granted to students who can document the fact that they have completed officer's training, have been granted a commission, and have been assigned to active military duty.

**Requirements for Degree May Be Completed in Three Years.** Although no reduction in course requirements or standards of work are contemplated, provision has been made whereby students may complete what normally constituted a four-year program in three years. Students may secure further information upon this point by addressing inquiries to the Registrar's Office.

### LOWER DIVISION

### Subject Matter Requirements in the Lower Division

| | |
|---|---|
| Physical Education | 2 units |
| Health Education 1 or 2 | 2 units |
| English | 6 units |
| Psychology | 3 units |
| *Foreign Language | 10 units |
| Mathematics LA and LB, 4 units, or high school algebra and geometry | |
| Social Sciences | 12 units |
| Natural Sciences | 12 units |
| **Year-course in foreign language or in mathematics, or in philosophy. | |
| (This year-course is an additional requirement to those listed above) | 6 units |

Electives to make total of 60 units.[1]

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* Not required in the teacher education and general engineering curricula.

**Not required in the teacher education curricula.

[1] Electives should include lower division preparation for the major. See pages 54-113. Requirements for the minor may be partially satisfied in the lower division. See page 19.

## Explanation of Lower Division Requirements

**English.** This requirement may be satisfied either in the freshman year or in the sophomore year. Courses are to be chosen from the following: English L1A or L1AA, 1B or 2A, 2B, 2C, 2D, 2E, 2F, 2G, 50A, 50B, 52A, 52B, 56A, 56B.

**Psychology.** Psychology 1A.

**Foreign Languages.** At least 10 units in one foreign language are required in the lower division except that no language is required in teacher education and engineering. No degree credit is given for only the beginning college semester of a foreign language.

### HIGH SCHOOL COURSES

The foreign language requirement may be met in part or in whole by high school work completed with grade of C or better, each year course being counted in satisfaction of 3 units of this requirement. Three years of foreign language in high school will satisfy the college requirement in foreign language. No foreign language credit is given for only one year of a high school course unless the grade is B or better or unless the course completed with C grade is continued in college. If two or more years have elapsed since the completion of a high school course in any foreign language the final year of the course may be repeated for college degree credit but not for additional credit in meeting the language requirement.

**Social Sciences.**[1] Twelve lower division units chosen from two or more departments are required in this field. All students must present credit for Social Science 1A or for an acceptable equivalent.

Additional lower division courses to meet the social science requirement must be chosen from the following list and must include one of the year courses marked with an asterisk: Anthropology 1A-1B,* 54, 55; Economics 1A-1B,* 18A-18B; Geography 2 or 10 B; History 4A-4B,* 8A-8B*; Political Science 1A-1B,* 71A-71B*; Social Science 1B; Sociology 50A-50B.*

### HIGH SCHOOL COURSES

Two semesters of fourth year high school courses in the fields of history, political science, sociology, and economics taken with grades of B or better may be used in satisfying 3 units of the social science requirement.

**Natural Sciences.**[1] Twelve lower division units chosen from courses representing each of the following groups are required:

(a) Biology 1 or a year course in high school or college biology, botany, physiology or zoology.

(b) Physical Science 1A or 1B or a year course in high school or college chemistry or physics.

(c) Lower division courses to meet the natural science requirement must be taken from the following lists and must include one of the college or high school laboratory courses marked with an asterisk: Astronomy 1, 2, 9; Bacteriology 1*; Biology 1, 10A-10B*; Botany 2A,* 2B,* 4; Chemistry 1A,* 1B,* 2A-2B,* 7-8*; Geography 1 or 3 (only one course may be counted toward requirement); Geology 1A, 1B,* 2A, 2B; Physical Science 1A, 1B; Physics 1A-1B,* 2A-2B, 3A-3B,* 1C-1D,* 54; Physiology 1A, 1C*; Zoology 1A,* 1B,* 8, 20.

### HIGH SCHOOL COURSES

A maximum of one year (3 units) of courses in botany, chemistry,* physics,* physiology, zoology, and advanced biology taken in the senior year with grades not lower than B may be used in satisfying the 12 unit natural science requirement.

**Mathematics.** High school elementary algebra and high school plane geometry completed with at least C grades or a year course in Mathematics LA-LB.

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[1] Teacher education students should follow carefully the curricular outlines to meet specific course requirements in this field.

**Additional Year Courses.** In addition to the foregoing minimum requirements in foreign language and mathematics, 6 units must be chosen from one of the following groups by all except teacher education students.

**Modern foreign language:** any two consecutive college courses, or any two consecutive high school year courses.

**Latin:** Two years of high school courses in Latin.

**Mathematics:** C, or D, or equivalent, and either 1, 3A, or 8. Students with the Commerce major may take Mathematics C, or equivalent, and Economics 2.

**Philosophy:** 3A-3B, 5A-5B.

**Lower Division Preparation for the Minor.** See description of requirements for liberal arts minors on page 20 and for teaching minors on page 22.

**Lower Division Preparation for the Major.** See description of requirements for teaching majors on page 21. Specific requirements for the majors in the liberal arts curricula are listed in connection with the descriptive list of courses in each major field (see pages 54-113).

### Limited Electives

A total of not more than 12 units of limited and vocational courses listed below will be counted toward the A.B. degree in Liberal Arts (for limitation in Teacher Education see page 24). Courses in education are included in this list principally because the major emphasis in the liberal arts program is non-professional and non-technical. Art L7, L14A, L65A, L65B; Economics L10A-L10B, L15A, L15B, L16A, L16B, L129, L163; Education, all courses except those listed as available for credit toward a minor (see Education minor on page 20); English L1A, L1AA, L8; Health Education L151; Journalism L53A, L53B, L153A, L153B; Library Science L10; Mathematics LA, LB; Merchandising, all courses; Music, L1A, L2A, L3A, L6A, L7A, L16A-B-C-D, L17A-B-C-D, L18A-B-C-D, L28A-L28B, L116A-B-C-D, L117A-B-C-D, L118A-B-C-D; Physical Education, all courses beyond the requirements specified in the curricular patterns except 30, 51, 170; Secretarial training, all courses; all courses numbered L40 and L45 if grade is below B.

## Specific Upper Division Requirements for the Liberal Arts Curricula

The liberal arts curricula lead to the bachelor of arts degree with majors in ar chemistry, commerce, economics, English, general engineering, geography, histor mathematics, music, physical science, physics, Romance languages, social scienc speech arts, and zoology and qualify for graduate work in these fields in recogniz American colleges and universities. Completion of the requirements of these curricu also enables the graduate to satisfy undergraduate requirements for the gener secondary credential which, with graduate work, will enable the holder to teach in senior high school or junior college.

### UPPER DIVISION

### Subject Matter Requirements

| | |
|---|---|
| Political Science 101 | 2 uni |
| Minor (minimum in upper division courses) | 6 uni |
| Major (upper division courses) | 24 uni |

At least 40 units in upper division courses must be completed, 30 of which must b earned after all lower division requirements have been satisfied.

### Explanation of Requirements

**Political Science 101.** Political Science 113 or 175A-175B or History 171A-171B o 173A-173B will be accepted as substitutes for this requirement.

**Minor.** Minors must be established in one of the following fields: anthropology, ar botany, chemistry, economics, education, English, foreign language, geography, geolog history, journalism, mathematics, music, philosophy, physics, political science, psychology, sociology, speech arts, and zoology.

*A minor consists of at least 12 units of work completed in one of the above fields o study. At least 6 of these units must be earned in upper division courses durin junior or senior years. The entire requirement for a minor may be met with uppe division courses provided these courses have no lower division prerequisites. Prerequisites for each course are listed among the course descriptions on pages 54 to 11*

**Minor in Education.** A student who desires to satisfy the undergraduate requirements for the general secondary teaching credential will minor in education. H should include in his program a major in a subject or field of subjects usually taught i high school and a minor in the field of education. In order to conform to the usua university requirements, this minor should include Education 102A-102B (or Education 130, and Psychology 102), and Education 115A-115B. Consultation with th Dean of Education or the Dean of Liberal Arts is recommended.

**Majors.** The specific requirements for each major are listed at the beginning of eac departmental division among the description of courses. (See pages 54 to 113.) Th student is advised to choose his major as early in his college course as practicable s that he may be able to plan his work according to the major requirements. Failure t meet the lower division requirements of the major department before the junior yea may make it impossible to satisfy the upper division requirements within the norma period of two years.

**Professional and Preprofessional Courses.** See pages 37 to 48.

### The General Major

The general liberal arts major of 36 upper division units must be chosen from thre departments with not more than 15 units from any one department allowed. Thi comprehensive major may be arranged to include minor requirements.

The general major is planned for students who are preparing for law, journalism library work, or for any other vocation requiring a background of general training It is available also to certain students who want a cultural education and who ca present satisfactory reasons for not specializing in any field. When the general majo is not a part of a four-year curriculum published in the college bulletin the tentativ program of the student should be planned in consultation with the Dean of Liberal Art and approved, revised, or rejected by the chairmen of the departments represented i the major.

## Specific Upper Division Requirements for the Teacher Education Curricula

**Admission to the Teacher Education Curricula.** *Admission to the college does not imply that the student will be admitted to the teacher education curriculum.* No student intending to enroll in the teacher education curriculum may enroll in an upper division course in education before being admitted to teacher education. Any exception to this rule must have the written approval of the Dean of Education. Students who have been in regular attendance at the college should make application for admission to the teacher education curricula during the first semester of their sophomore year. The preliminary requirements which must be met before admission to teacher education curricula are

1. A satisfactory score in a college aptitude test taken at the college. (See college calendar for date of test.)
2. Evidence of satisfactory ability in arithmetic, handwriting, reading and spelling indicated by having passed the fundamentals test. (See college calendar for date of test.)
3. Assurance of correct speech habits and voice control by having satisfactorily completed a course in corrective speech or by having passed a speech test given by the college.
4. Assurance of physical fitness by having passed a prescribed examination given by one of the college physicians.
5. If the student is to be a candidate for one of the special secondary credentials, he must furnish a recommendation from the chairman of that department stating that the student has ability and shows promise of teaching success in his field and that the department looks with favor upon his application.
6. The completion of the first two years or more of a given curriculum, or its equivalent, with a grade point average of 1.2 or better.

After the student has submitted evidence of having met the preliminary requirements in his application for admission to the teacher education curricula he will be interviewed by the members of a committee appointed by the faculty for this purpose. In the appraisal of applicants the committee gives careful consideration to the following factors established by the State Board of Education: intelligence, scholarship, professional aptitude, personality and character, speech and language usage, and many-sided interests.

**Transfer Students.** Students who have completed two or more semesters of work in another college, upon transferring to San Diego State College, should make application for admission to teacher education as soon as they enroll in the college. It will be advantageous for transfer students to present themselves for the necessary tests given during the orientation period preceding enrollment in the college.

**Advanced Standing in Teacher Education.** A maximum of 18 units in courses in education will be credited toward degree requirements in case such work was taken more than five years before entering upon the degree curriculum at this college (date of first work taken after an evaluation of record has been made, for students entering with advanced standing).

After an interval of five years, evaluations are subject to revision in the light of such new requirements as may have been put into effect and with respect to deduction in credit in education courses.

Students formerly in attendance will not be considered to be working in the degree curriculum until an evaluation and statement of credit has been secured from the Registrar's office. All courses taken either at this college or elsewhere must be approved by an official adviser or the Assistant Registrar (for those taken elsewhere) in order to be credited toward meeting degree requirements.

***Teaching Major Defined.*** A teaching major consists of a minimum of 24 units in a field other than education, at least 12 of which must be in the upper division. A *C* average in scholarship is required in all upper division courses in the field of the teaching major. A major for a special secondary credential varies from 24 to 40 units a specified in the requirements for the various curricula. Teaching majors may be established in the following fields: English, foreign languages, general sciences, mathematic and social sciences (anthropology, economics, geography, history, political science sociology) and in the special secondary credential fields of art, business education, music physical education, and speech arts.

*Teaching Major in English.* Candidates for the teaching major in the field of Englis are expected to show credit in English 1B or 1C and 9 elective units of lower divisio work and in 12 units of upper division work. This credit must include 3 units i American Literature (either lower or upper division) and 3 units in Shakespeare Recommended: English 2D and 112.

*Teaching Major in General Science.* Candidates for a teaching major in the field o general science are required to include a college year course in a biological science, a year course in high school or college physics and a concentration of 12 units, at leas 6 of which are upper division, in one major subject (botany, chemistry, physics zoology). *See definition of teaching majors.*

*Teaching Major in Social Science.* Candidates for a teaching major in the field of th social sciences are required to include in their programs a year course in moder American history and a concentration of 12 units, at least 6 of which are upper division in one major subject (anthropology, economics, geography, history, political science sociology). *See definition of teaching majors.* The following courses may not be applied to the teaching major in the field of the social sciences; Economics 14A-14B 18A-18B, 140, 160A-160B, 161, 162, 163, 164, 165; and all courses in merchandising.

*Teaching Minor Defined.* A teaching minor consists of 12 units in a given field, at least 6 of which must be in upper division courses. Teaching minors may be established in the following fields: art, business education, English, foreign language, general science, mathematics, music, social sciences (anthropology, economics, geography, history, political science, sociology), physical education, and speech arts.

*Teaching Minor in English.* Candidates for the teaching minor in English must show credit in English 1B and 3 elective units of lower division work; and in 6 elective units in upper division English. This credit must include 3 units in American literature, taken either in lower division or upper division. Credit in journalism and speech arts may not be used to fulfill the requirements for the English minor. Recommended: English 2D.

*Teaching Minor in Music.* Candidates for the teaching minor in music are required to take music aptitude tests at the time the minor is chosen and to enroll in at least one music activity each semester. In special cases this requirement may be waived by petition to the Music Department.

Applicants for music minors must maintain a grade average of *C* in all music courses. To Music L1A and L7A, required for the elementary credential, the following 12 units are added for the music minor. In the lower division, with the proper regard for course sequences, 6 units may be chosen from the following courses: Music 1B-1C-1D; L2A; L3A; 4A-4B; L6A, 8A-8B; L16; L17; L18; Aesthetics 1A-1B. In the upper division, not less than 6 units may be chosen from the following courses: Music 105A-105B; 106A; 107A; L116; L117; L118; 119A; 120A; 121A; Aesthetics 102A-102B.

*Teaching Minor in Physical Education.* Candidates for a teaching minor in physical education for women must show credit for Physical Education L1A, L1B, L1C, 51, L53, and 1 unit of sophomore activities and 6 units elected from Physical Education L157A, L157B, L161, and 170 in the upper division.

Candidates for a teaching minor in physical education for men must show credit for Physical Education L1A, L1B, L1C, L1D, L53, and L62A in the lower division; and 6 units elected from Physical Education L156A, L156B, L161, 170 or L190 in the upper division.

**Major and Minor Credential Requirements**

1. **Kindergarten-Primary Credential:** Two teaching minors are required.
2. **The general elementary school credential:** Two teaching minors are required.
3. **The general junior high school credential:** A teaching major and a teaching minor *in subjects taught in a high school are required.* The combination of a special secondary credential with the junior high school credential requires the completion of another teaching major than that required for a special secondary credential; the units required for this additional major may be included in the 12 additional units required for the second credential.
4. **A special secondary credential:** The completion of the major in the special subject field (*see detailed outlines of curricular patterns for credentials*) and a teaching minor are required.
5. **Credit limitations:** A maximum of 40 units of credit in one subject matter field may be applied toward the requirements for the A.B. degree.

**Preparation for Graduate Work.** Students who take the A.B. degree with a special credential and who contemplate doing graduate work for a master's degree in an academic field at another institution of higher learning, will find it advantageous to use their electives to lay a foundation for that work. A student who plans to do graduate work in the field of his major is advised to so arrange his electives as to complete the equivalent of the liberal arts major to avoid the necessity of making up an undergraduate deficiency.

**Political Science.** The course in Political Science 101 or its equivalent is required of all graduates of the college or those securing a teaching credential through the college. The following courses are accepted as equivalents: Political Science 113 or 175A-175B; History 171A-171B or 173A-173B.

**Upper Division Course Requirement.** At least 40 units in upper division courses must be completed, 30 of which must be earned after all lower division requirements have been satisfied.

**Teacher Education Curricula and Teaching Credentials.** The college offers curricula leading to the A.B. degree with authorization to recommend candidates for the following teaching credentials:

1. **Kindergarten-Primary Credential** authorizing the holder to teach in the kindergarten and in grades one, two and three of any elementary school in California.
2. **General Elementary School Credential** authorizing the holder to teach any or all subjects in all eight grades of any elementary school in California.
3. **General Junior High School Credential** authorizing the holder to teach any or all subjects in the seventh, eighth, and ninth grades of any elementary or secondary school in California. It will be advantageous to the student to secure this credential in combination with the elementary school credential, one of the special secondary credentials, or in combination with additional course requirements in the teaching major and in education as a preparation for graduate work for the general secondary credential. *Candidates for the latter type of combination should consult the Dean of Education regarding requirements.*
4. **Special Secondary Credential in Art** authorizing the holder to teach art subjects in any grade of the public schools of California.
5. **Special Secondary Credential in Business Education** authorizing the holder to teach commercial subjects in any grade of the public schools of California.
6. **Special Secondary Credential in Music** authorizing the holder to teach music in any grade of the public schools of California.
7. **Special Secondary Credential in Physical Education** authorizing the holder to teach physical education in any grade of the public schools of California.

8. **Special Secondary Credential in Speech Arts.** See page 35.

9. **Administration and Supervision Credentials:** Candidates desiring to qualify for administration and supervision credentials will meet the credential requirements as outlined in State Department of Education Bulletin, Volume XI, No. 2, June, 1942, *Regulations Governing Granting of Credentials for Public School Service in California.* At least one-half of the work required for this credential shall be done in San Diego State College if the college is to recommend the candidate for the credential. Further information will be furnished by the college upon request by the applicant.

**Combination of Credentials.** In the case of students seeking more than one teaching credential, the curriculum for each credential must be completed in full, with only such exceptions as are indicated in the requirements. For each credential in addition to one, at least 12 additional units of credit must be earned, this work to be in electives in nonprofessional fields only, after the basic curriculum requirements have been satisfied.

A combination of the elementary school credential with the junior high school credential may be secured by completing the requirements for the elementary school credential and the following additional requirements: (a) a teaching major; (b) Education 100B; (c) a minimum of 3 units of practice teaching in a junior high school or the equivalent; (d) a course in Education 115B, *Secondary Education;* (e) a total minimum of 132 units.

A candidate for either the general elementary credential or the kindergarten-primary credential may secure the other credential subsequently or concurrently by taking 12 additional units. Four of these units shall be in directed teaching (Education 116) at the new level, 4 in methods at that level, and 4 as prescribed by the Dean of Education.

**Limited Electives.** Credit for limited and vocational courses will be allowed in fulfillment of the requirements for the A.B. degree whenever they are required in any credential pattern completed by the student. A maximum of 6 units of credit in the following courses may be allowed to fulfill the requirements of any other credential pattern only after the student has received permission from the Dean of Education: Art L7, L14A; Economics L10A, L10B, L15A, L15B, L16A, L16B, L65A, L65B, L129, L163; Engineering L22, L23; English L1A, L1AA, L8; Health Education L151; Journalism L53A, L53B, L153A, L153B; Library Science L10; Mathematics LA, LB; Merchandising, all courses; Music L1A, L2A, L3A, L6A, L7A, L16A-B-C-D, L17A-B-C-D, L18A-B-C-D, L28A-L28B, L116A-B-C-D, L117A-B-C-D, L118A-B-C-D; Physical Education, all activity courses beyond the requirements specified in curricular patterns; Secretarial Training, all courses; and all courses numbered L40 or L45 if grade is below a B.

## Curricula Leading to Teaching Credentials

*All candidates in teacher education curricula should observe carefully the requirements for admission to teacher education and be prepared to meet them at the end of the sophomore year. Students in other colleges who contemplate transferring to San Diego State College should arrange their programs so as to meet the requirements of their particular curriculum as early as possible. See college calendar for dates when the fundamentals test will be given. See page 21 in this bulletin for requirements for admission to teacher training.*

### A.B. Degree with Kindergarten-Primary Credential

*Two teaching minors are required. See statement on page 22*

| FRESHMAN YEAR | Units | |
|---|---|---|
| **First Semester—** | | |
| Art 6A, Structure | 2 | |
| Biology 10A[1], General Biology | 3 | |
| English L1A[2], or L1AA[2], or 1B[2], Freshman English | 3 | |
| Physical Education, Freshman Activities [7] | ½ | |
| Health Education 1 or 2 | 2 | |
| Music L28A, Piano (or equivalent by examination) [8] | 1 | |
| Elective to meet requirements in Nat. Sci., Soc. Sci., and minors [3,4] | 5 | |
| **Second Semester—** | | |
| Biology 10B[1], General Biology | 3 | |
| English 1B, or 2 | 3 | |
| Music L1A, Musicianship—Fundamentals of Music | 3 | |
| Music L28B, Piano (or equivalent by examination) [8] | 1 | |
| Physical Education, Freshman Activities [7] | ½ | |
| Elective to meet requirements in Nat. Sci., Soc. Sci., and minors [3,4] | 5 | |
| | — | 32 |
| SOPHOMORE YEAR | | |
| **First Semester—** | | |
| Art 6B, Structure | 2 | |
| Speech Arts 1A, Fundamentals of Public Speaking | 3 | |
| Physical Education, Sophomore Activities [7] | ½ | |
| Geography 1, Elements (Natural Science) | 3 | |
| **Second Semester—** | | |
| Physical Education L53, Physical Education in the Elementary School | 2½ | |
| Geography 2, Regions (Social Science) | 3 | |
| **Either Semester—** | | |
| Art 61A, Elementary Crafts | 2 | |
| Music L7A, Music Materials for the Elementary School | 3 | |
| Psychology 1A, General | 3 | |
| Social Science 1A | 3 | |
| Elective to meet requirements in Nat. Sci., Soc. Sci., and minors [3,4,5] | 6 | |
| | — | 31 |

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[1] Possible substitutions for the requirement in Biology 10A-10B:
- a. High school Biology (year course with laboratory work).
- b. Botany 2A-2B and Zoology 1A-1B—16 units.
- c. High school Botany and Zoology 1A-1B.
- d. High school Zoology and Botany 2A-2B.
- e. High school Botany and high school Zoology.
- f. Biology 1 and Physical Science 1A or 1B—6 units.

[2] Depending on result of Subject A test.

[3] See Subject Matter Requirements in the Lower Division for total requirements in English, Natural Sciences, Social Sciences and Mathematics. See page 17.

[4] Use these electives to meet requirements for minors if they are not English, General Science or Social Sciences.

[5] If 6 units in minor taken in freshman year, none needed in sophomore year.

[6] Candidates for an Elementary School Credential in combination with any other type of credential are required to do not less than 6 units of directed teaching in the elementary school.

[7] Folk Dancing and Rhythmic Skills are recommended for this credential.

[8] Piano may be taken at any time during the first three years. The requirement may be met by examination.

### JUNIOR YEAR

| | | Units | |
|---|---|---|---|
| **First Semester—** | | | |
| Education 102B, Child Growth and Development | | 3 | |
| Education L147B, Education Practicum—Primary Level | | 12 | |
| Teaching of Art | 1 | | |
| Elementary Music Education | 1 | | |
| Elementary School Reading | 2 | | |
| Elementary Education Methods | 3 | | |
| Mental Hygiene | 2 | | |
| Story Telling and Speech | 1 | | |
| Directed Teaching | 2 | | |
| | 12 | | |
| **Second Semester—** | | | |
| Education L147A, Education Practicum—Kindergarten Level | | 10 | |
| Elementary Art Education | 1 | | |
| Elementary Music Education | 1 | | |
| English, Children's Literature | 2 | | |
| Kindergarten-Primary Education | 4 | | |
| Educational Psychology | 2 | | |
| | 10 | | |
| Education L116, Directed Teaching in Kindergarten (to be taken concurrently with Education L147A) | | 4 | |
| | | | 29 |

### SENIOR YEAR

| | | |
|---|---|---|
| Education 102A, Measurement in Education | 3 | |
| Education 115A, History and Philosophy of Education | 3 | |
| Education L116, Directed Teaching in Primary Grades | 3 | |
| Health Education 151 | 2 | |
| Elective (including two minors and political science requirement) | 17 | |
| | | 28 |
| | | 120 |

### SUMMARY

| | |
|---|---|
| Art 6A-B, 61A | 6 |
| Education 102A-B, 115A, L116, L147A-B | 38 |
| English and Speech Arts | 9 |
| Health Education 1 or 2, and 151 | 4 |
| Music L1A, L7A, L28A-B | 8 |
| Natural Sciences (including Biology 10A-B and Geography 1) | 12 |
| Physical Education L1A-B-C, L53 | 4 |
| Political Science 101 or substitute, see page 20 | 2 |
| Psychology 1A | 3 |
| Social Sciences (including Geography 2) | 12 |
| Elective (including two teaching minors) | 22 |
| Total | 120 |

## A.B. Degree With General Elementary School Credential

*Two teaching minors are required, see page 22*

### FRESHMAN YEAR

| | Units |
|---|---|
| **First Semester—** | |
| Art 6A, Structure | 2 |
| Biology 10A,[1] General Biology | 3 |
| English L1A,[2] or L1AA,[2] or 1B,[2] Freshman English | 3 |
| Geography 1, Elements (Natural Science) | 3 |
| Physical Education, Freshman Activities | ½ |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| Electives [3, 4] | 2 |
| **Second Semester—** | |
| Biology 10B,[1] General Biology | 3 |
| English 1B or 2D | 3 |
| Geography 2, Regions (Social Science) | 3 |
| Music L1A, Musicianship—Fundamentals of Music | 3 |
| Physical Education, Freshman Activities | ½ |
| Electives [3, 4] | 2 |
| | 30 |

### SOPHOMORE YEAR

| | |
|---|---|
| **First Semester—** | |
| Art 6B, Structure | 2 |
| English (selected from 1B, 2D, unless taken in freshman year, or from 52A, 52B, 56A, 56B) | 3 |
| Physical Education, Sophomore Activities | ½ |
| **Second Semester—** | |
| Physical Education L53—Physical Education in the Elementary School | 2½ |
| **Either Semester—** | |
| Art 61A, Elementary Crafts | 2 |
| Art 61B, Elementary Crafts | 2 |
| Music L7A, Music Materials for the Elementary Schools | 3 |
| Psychology 1A, General | 3 |
| Social Science 1A, Pol. Soc. and Econ. Problems | 3 |
| Laboratory Science unless Physics or Chemistry was taken in high school or Biology 10A-10B in freshman year | 3–4 |
| Electives to meet requirements in Natural Sciences, Social Sciences, and minors [3, 4, 5] | 5–6 |
| | 30 |

### JUNIOR YEAR

| | |
|---|---|
| **First Semester—** | |
| Education 102A, Measurement in Education | 3 |
| Education L147B, Education Practicum—Lower Levels | 12 |
| **Second Semester—** | |
| Education 102B, Child Growth and Development | 3 |
| Education L148, Education Practicum—Upper Levels | 12 |
| | 30 |

### SENIOR YEAR

| | |
|---|---|
| Education L116, Directed Teaching [6] | 6 |
| **Either Semester—** | |
| Education 115A, History and Philosophy of Education | 3 |
| Electives including two minors and political science requirement (for the year) | 21 |
| | 30 |

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[1,2,3,4,5,6] See footnotes for Kindergarten-Primary Credentials, page 25.

### SUMMARY

| | Units |
|---|---|
| Art 6A, 6B, 61A, 61B | 8 |
| Education 102A-102B, 115A, L116, L147, L148 | 39 |
| English | 6 |
| Health Education 1 or 2 | 2 |
| Music L1A, L7A | 5 |
| Natural Sciences (incl. Biology 10A-10B and Geog. 1) | 12 |
| Physical Education L1A-B-C, L53 | 4 |
| Political Science 101 | 2 |
| Psychology 1A | 3 |
| Social Sciences (including Social Science 1A and Geography 2) | 12 |
| Electives, including two teaching minors | 27 |
| | 120 |

**A.B. Degree With General Junior High School Credential.** (See statements on page 21 about teaching majors and minors.) Students who expect to secure the Master of Arts Degree, or the general secondary credential, should complete 24 upper division units in the departmental major instead of the 12 upper division units required for this credential. See statement on page 23 regarding combinations of this with other credentials.

**First Semester—**

| | |
|---|---|
| Biology 10A,[1] General Biology | 3 |
| English L1A,[2] or L1AA,[2] or 1B[2] | 3 |
| Geography 1, Elements (Natural Science) | 3 |
| Physical Education, Freshman Activities | ½ |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| Electives,[3] includes major and minor[4] | 3 |

**Second Semester—**

| | |
|---|---|
| Biology 10B,[1] General Biology | 3 |
| English 1B or 2D | 3 |
| Geography 2, Regions (Social Science) | 3 |
| Physical Education, Freshman Activities | ½ |
| Electives,[3] including major and minor[4] | 6 |
| | 30 |

### SOPHOMORE YEAR

**First Semester—**

| | |
|---|---|
| Physical Education, Sophomore Activities | ½ |
| Psychology 1A, General | 3 |

**Second Semester—**

| | |
|---|---|
| Physical Education, Sophomore Activities | ½ |

**Either Semester—**

| | |
|---|---|
| Social Science 1A, Pol., Soc. and Econ. Problems | 3 |
| Laboratory Science unless Physics or Chemistry was taken in High School or Biology 10A-10B in Freshman year | 3–4 |
| Elective,[3] including major and minor[5] (for the year) | 19–20 |
| | 30 |

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[1] Possible substitutions for the requirement in Biology 10A-10B:
- a. High school Biology (year course with laboratory work).
- b. High school Botany and Zoology 1A-1B.
- c. High School Zoology and Botany 2A-2B.
- d. High School Botany and high school Zoology.
- e. Biology 1 and Physical Science 1A or 1B—6 units.
- f. Botany 2A-2B and Zoology 1A-1B—16 units.

[2] Depending on result of Subject A test.

[3] See Subject Matter Requirements in the Lower Division, page 17, for total requirements in English, Natural Sciences, Social Sciences, and Mathematics.

[4] Unless minor is English, General Science or Social Science.

[5] If 6 units in minor taken in freshman year, none needed in sophomore year.

### JUNIOR YEAR

| | Units |
|---|---|
| **First Semester—** | |
| Education L100A,[6] Methods and Materials of Instruction | 3 |
| Education 102A, Measurement in Education | 3 |
| Political Science 101, American Institution (or substitute) | 2 |
| **Second Semester—** | |
| Education L100B, Methods and Materials of Instruction | 3 |
| Education 102B, Child Growth and Development | 3 |
| Education L116, Directed Teaching | 3 |
| **Either Semester—** | |
| Health Education 151, Health Education | 2 |
| Electives, including major and minor (for the year) | 11 |
| | 30 |

### SENIOR YEAR

| | |
|---|---|
| **First Semester—** | |
| Education 115A, History and Philosophy of Education | 3 |
| Education L116, Directed Teaching | 3 |
| **Second Semester—** | |
| Education 115B, Secondary Education | 3 |
| **Either Semester—** | |
| Electives, including major and minor[7] (for the year) | 21 |
| | 30 |

### SUMMARY

| | |
|---|---|
| Education L100A[6]-L100B, 102A-102B, 115A-115B, L116 | 24 |
| English | 6 |
| Health Education 1 or 2; 151 | 4 |
| Natural Sciences (including Biology 10A-10B and Geog. 1) | 12 |
| Physical Education | 2 |
| Political Science 101 | 2 |
| Psychology 1A | 3 |
| Social Sciences (including Social Science 1A and Geography 2) | 12 |
| Electives, including teaching major and minor | 55 |
| | 120 |

**A.B. Degree With Special Secondary Credential in Art.** This course leads to the A.B. degree and to the Special Secondary Credential in Art which entitles the holder to teach art in senior high, junior high, and elementary schools.

### LOWER DIVISION

| | Units |
|---|---|
| Aesthetics 50, History and Appreciation of Art | 2 |
| Art A, Freehand Drawing and Perspective[8] | 3 |
| Art 6A-6B, Structure | 4 |
| Art 14A, Lettering | 2 |
| Art 61A, 61B, Fine and Industrial Arts, Elementary Crafts | 4 |
| † English | 6 |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| † Natural Sciences (including laboratory course unless taken in high school) | 9–12 |
| Physical Education, Freshman and Sophomore Activities | 2 |
| Psychology 1A, General | 3 |
| †Social Sciences (including Social Science 1A) | 9–12 |
| Electives, including additional art for major and courses for teaching minor[9] | 8–14 |
| | 60 |

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[6] Not required if student is meeting requirements for elementary credential also.

[7] If 6 units in minor taken in junior year, none needed in senior year.

[8] Not required if student has had a year of Freehand Drawing in high school and can pass a proficiency examination.

[9] Unless minor is English, General Science, or Social Science.

† See Subject Matter Requirements in the Lower Division, page 17.

UPPER DIVISION

| | Units |
|---|---|
| Aesthetics 150, Appreciation and History of Art | 2 |
| Art 106A-106B, Printmaking | 4 |
| Art 112A-112B, Organization | 6 |
| Art 116A, Advanced Painting | 3 |
| Art 152A (unless 52A was taken in lower division), Stage Design | 0–2 |
| Art 195, Home Decoration | 2 |
| Electives in U. D. Art | 3–5 |
| Education L100A,[1] Methods and Materials of Instruction | 3 |
| Education L100B, Methods and Materials of Instruction | 3 |
| Education 102A, Measurement in Education | 3 |
| Education 102B, Child Growth and Development | 3 |
| Education 115B, Secondary Education | 3 |
| Education L116, Directed Teaching (4 units in special field) | 6 |
| Education L119, Art in the Elementary School | 2 |
| Political Science 101, American Institutions (or substitute) | 2 |
| Electives, including additional art and teaching minor | 11–15 |
| | 60 |

SUMMARY

| | |
|---|---|
| Aesthetics 50 and 150 | 4 |
| Art major | 40 [2] |
| Education | 23 |
| English | 6 |
| Health Education 1 or 2 | 2 |
| Natural Sciences | 12 |
| Physical Education | 2 |
| Political Science 101 | 2 |
| Psychology 1A | 3 |
| Social Sciences (including Social Science 1A) | 12 |
| Electives, including teaching minor | 14 |
| | 120 |

**A.B. Degree With Special Secondary Credential in Business Education.** This course leads to the A.B. degree and to the Special Secondary Credential in Business Education, which entitles the holder to teach business subjects in senior high and junior high schools.

In addition to the following academic requirements, satisfactory evidence of one-half year, or 1000 hours of approved experience in the field named in the credential must be submitted.

*Accounting and Secretarial Subfields*

LOWER DIVISION

| | Units |
|---|---|
| Economics 1A-1B, Principles | 6 |
| Economics 14A-14B, Accounting | 6 |
| English L8, English in Business | 3 |
| Geography 10A-10B, Economic Geography | 6 |
| [3] Natural Sciences | 9 |
| Physical Education, Freshman and Sophomore Activities | 2 |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| Speech Arts 1A, Fundamentals of Public Speaking | 3 |
| Social Science 1A, Pol., Soc. and Econ. Problems | 3 |
| Psychology 1A, General | 3 |
| Secretarial Training, LA, Business Mathematics | 1 |
| Secretarial Training L1A-L1B, Typewriting | 6 |
| Secretarial Training L5A-L5B, Stenography | 10 |
| | 60 |

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[1] Not required if student is meeting requirements for elementary credential also.

[2] Maximum credit allowable in art.

[3] See page 18. Students deficient in high school natural science will have to make up such deficiency in college. See Subject Matter Requirements in the Lower Division.

| UPPER DIVISION | Units |
|---|---|
| Secretarial Training 3A, Office Methods and Appliances | 3 |
| Economics 18A-18B, Commercial Law | 6 |
| Economics 100, or 102 or 111 or 123 | 3 |
| Economics 121, Business Administration | 3 |
| Upper Division Accounting | 6 |
| Education L100A-L100B, Methods and Materials of Ed. | 6 |
| Education 102A, Measurements in Education | 3 |
| Education 102B, Child Growth and Development | 3 |
| Education 115B, Secondary Education | 3 |
| Education L116, Directed Teaching | 6 |
| Special Methods Courses as prescribed by major department | 4 |
| Political Science 101, American Institutions (or substitute) | 2 |
| Minor | 6 |
| Electives | 6 |
| | 60 |

**A.B. Degree With Special Secondary Credentials in Music.** Students intending to become applicants for this credential must show evidence of musical ability, before entering the course. They must be able to play artistically upon the piano, music of the grade of the simpler *Songs Without Words* of Mendelssohn or else possess a corresponding degree of proficiency in voice or an orchestral instrument. No credit is given to music majors for the basic courses of Music L1A and Music L7A, but if a deficiency exists in the field of general musicianship, the student will be required to take either or both of these courses without credit.

All music majors are required to enroll in two musical activities each semester. In special cases this requirement may be waived by petition to the Music Department. All students are required to pass examinations in applied music in order to receive credit. No credit is allowed to majors in voice or orchestral instruments for any work in piano which is below the level of artistic hymn playing.

Applicants for the Special Secondary Credential in Music must maintain a grade average of *C* or better in music courses.

All students majoring in music are required to pass a comprehensive examination in this field during the senior year.

This course leads to the A.B. degree with a Special Secondary Credential in Music which will authorize the holder to teach music in the elementary, junior and senior high schools of the State.

A maximum of 40 units in Music may be used toward the A.B. degree. Of these 40 units a maximum of 3 may come from the field of musical activities: band, choir, chorus, glee clubs and orchestra.

FRESHMAN YEAR

**First Semester—**

| | Units |
|---|---|
| English L1A,[1] 1B,[1] | 3 |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| History 4A or 8A | 3 |
| Aesthetics 1A, Survey of Music | 2 |
| Music 1B, Music Reading and Ear Training | 2 |
| Music L18, Individual Study of Piano or Organ | 1 |
| Physical Education | ½ |
| | 13½ |

**Second Semester—**

| | |
|---|---|
| [2]English | 3 |
| Geography 1, Elements (Natural Science) | 3 |
| Social Science 1A, Contemporary Pol., Soc. and Econ. Problems | 3 |
| Aesthetics 1B, Survey of Music | 2 |
| Music 1C, Advanced Music Reading and Ear Training | 2 |
| Music L3A, Woodwind Instrument Class | 1 |
| Music L18B, Individual Study of Piano or Organ | 1 |
| Physical Education | ½ |
| | 15½ |

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[1] Depending on result of Subject A test.

[2] See Lower Division Requirements on page 18.

## SOPHOMORE YEAR

**First Semester—**

| | Unit |
|---|---|
| Music 1D, Advanced Music Reading and Ear Training | 2 |
| Music L2A, String Instrument Class | 1 |
| Music 4A, Elementary Harmony | 3 |
| Music L18c, Individual Study of Piano or Organ | 1 |
| *Natural Sciences | 3 |
| Geography 2, Regions (Social Science) | 3 |
| Physical Education | ½ |
| Elective | 1 |
| | 14½ |

**Second Semester—**

| | |
|---|---|
| Music 4B, Elementary Harmony | 3 |
| Music L6A, Individual Study of an Orchestral Instrument | 1 |
| Music L17, Individual Study of Voice | 1 |
| Music L18, Individual Study of Piano or Organ | 1 |
| Psychology 1A, General | 3 |
| *Natural Sciences | 6 |
| Physical Education | ½ |
| | 15½ |

## JUNIOR YEAR

**First Semester—**

| | |
|---|---|
| Music 105A, Advanced Harmony and Composition | 3 |
| Education L117A, Music in Elementary School | 2 |
| Education L145, Organization and Administration of Music Education | 2 |
| Education 102A, Measurement in Education | 3 |
| Education L100A, Methods and Materials of Instruction | 3 |
| Upper Division Minor | 3 |
| | 16 |

**Second Semester—**

| | |
|---|---|
| Political Science 101, American Institutions (or substitute) | 2–3 |
| Music 105B, Advanced Harmony and Composition | 3 |
| Music L117A, Advanced Individual Study of Voice | 1 |
| Education L100B, Methods and Materials of Instruction | 3 |
| Education 102B, Child Growth and Development | 3 |
| Upper Division Minor | 3 |
| | 15–16 |

## SENIOR YEAR

**First Semester—**

| | |
|---|---|
| Music 107A, Form and Analysis | 2 |
| Music 119, Instrumental Conducting | 1 |
| Music L117B, Advanced Individual Study of Voice | 1 |
| Aesthetics 102A, History of Music | 2 |
| Education L116, Directed Teaching | 6 |
| **Music Activities | 2 |
| | 14 |

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* See Subject Matter Requirement in the Lower Division on page 18.

** NOTE.—A maximum of 3 units is credited toward the Special Secondary Credential in Music for music activities carried on throughout the four year course. These activities: band, choir, glee clubs, chorus and orchestra are an integral part of the work of the course and each music major is expected to participate in at least two of these each semester unless excused by the Music Department.

| **Second Semester—** | Units |
|---|---|
| Music 106A, Counterpoint | 2 |
| Music L117C, Advanced Individual Study of Voice | 1 |
| Music 120A, Vocal Conducting | 1 |
| Music 121A, Instrumentation | 2 |
| Aesthetics 102B, History of Music | 2 |
| Education 115B, Secondary Education | 3 |
| Education L116, Directed Teaching | 3 |
| **Music Activities | 1 |
| | 15 |

SUMMARY

| | |
|---|---|
| Health Education 1 or 2 | 2 |
| Aesthetics 1A, 1B, 102A, 102B | 8 |
| Education L100A, L100B, 102A, 102B, 115B, L116, L117, L145 | 28 |
| English | 6 |
| Upper Division Minor | 6 |
| Natural Sciences (including Geography 1) | 12 |
| Music 1B, 1C, 1D, L2A, L3A, 4A, 4B, L6A, L17A-B-C-D, L18A-B-C-D, 105A, 105B, 106A, 107A, 119, 120A, 121A, Music Activities | 40 |
| Social Sciences (including Soc. Sci. 1A, Geog. 2, and Hist.) | 12 |
| Psychology 1A | 3 |
| Physical Education | 2 |
| Elective | 1 |
| | 120 |

**A.B. Degree With Special Secondary Credential in Physical Education.** This course leads to the A.B. degree and to the Special Secondary Credential in Physical Education which entitles the holder to teach physical education in senior high, junior high, and elementary schools.

*MEN*

| LOWER DIVISION | Units |
|---|---|
| Biology 10A-10B, General Biology (unless taken as a year course in high school with at least a grade of B)<br>or<br>Zoology 1A, General | 4–6 |
| †English | 6 |
| Health Education 1 | 2 |
| †Natural Sciences | 3 or 5 |
| Physical Education: | |
| L1A-1B, L1C-1D | 2 |
| 30, Emergencies | 2 |
| L53, Physical Education in the Elementary School | 2½ |
| L62A, L62B, Gymnastic Activities | 4 |
| L72, Principles | 2 |
| Sports and Athletics [1] | 2 |
| Psychology 1A, General | 3 |
| †Social Sciences, including Social Science 1A, Political, Social and Economic Problems | 12 |
| Speech Arts 1A, Fundamentals of Public Speaking | 3 |
| Zoology 8, Human Anatomy (or Zoology 108) | 3 |
| Electives, including courses to meet minor requirements [2] | 7½ |
| | 60 |

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** NOTE.—A maximum of 3 units is credited toward the Special Secondary Credential in Music for music activities carried on throughout the four year course. These activities, band, choir, glee clubs, chorus and orchestra are an integral part of the work of the course and each music major is expected to participate in at least two of these each semester unless excused by the Music Department.

† See Subject Matter Requirements in the Lower Division, page 17.

[1] Men majoring in Physical Education are requested to participate actively in at least one sport and two additional activities per year in order to secure adequate activity background for teaching.

[2] Unless minor is English, General Science, or Social Science.

### UPPER DIVISION

| | Unit |
|---|---|
| Education L100A-L100B, Methods and Materials of Instruction | 6 |
| Education 102A, Measurement in Education | 3 |
| Education 102B, Child Growth and Development | 3 |
| Education 115B, Secondary Education | 3 |
| Education L116, Directed Teaching | 6 |
| Health Education 151 | 2 |
| Political Science 101, American Institutions (or substitute) | 2 |
| Zoology 114A, Genetics | 2 |
| Physical Education: | |
| L154, Organ. and Admin. of Physical Education | 3 |
| L155, Applied Anatomy | 3 |
| L156A-156B, Sports Methods | 4 |
| 161, Folk Dancing | 2 |
| L169, Technique of Teaching Activities | 2 |
| 170, Recreational Leadership | 2 |
| L190, Individual Program Adaptation | 3 |
| Sports and athletics [1] | 2 |
| Electives | 12 |
| | 60 |

### SUMMARY

| | |
|---|---|
| Education L100A-L100B, 102A-102B, 115B, L116 | 21 |
| English | 6 |
| Health Education 1, 151 | 4 |
| Speech Arts 1A | 3 |
| Natural Sciences (including Biology 10A-10B or substitute and Zoology 8) | 12 |
| Physical Education teaching major | 35½ |
| Political Science 101 | 2 |
| Psychology 1A | 3 |
| Social Sciences (including Social Science 1A) | 12 |
| Zoology 114A | 2 |
| Electives, including minor | 19½ |
| | 120 |

## (A.B. Degree with Special Secondary Credential in P.E.)

## *WOMEN*

### LOWER DIVISION

| | |
|---|---|
| Music 1A, Musicianship—Fundamentals of Music | 3 |
| *English | 6 |
| Health Education 2, Health and Social Adjustment | 2 |
| *Natural Sciences (including Biology 10A-10B) | 12 |
| Physical Education: | |
| L1A, Fundamental Skills | ½ |
| L1B, Folk Dancing | ½ |
| L1C, Rhythmic Skills | ½ |
| L5B, Archery | ½ |
| L6A, Badminton | ½ |
| L7A or 7B, Golf | ½ |
| L11B, Tennis | ½ |
| L53, Physical Education in the Elementary School | 2½ |
| Health Education 51, First Aid and Safety Education | 1 |
| Psychology 1A, General | 3 |
| *Social Sciences (including Soc. Science 1A) | 12 |
| Speech Arts | 3 |
| Zoology 8, Human Anatomy | 3 |
| Electives, including minor [1] | 9 |
| | 60 |

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* See Subject Matter Requirements in the Lower Division, page 17.

[1] Men majoring in Physical Education are requested to participate actively in at least one sport and two additional activities per year in order to secure adequate activity background for teaching.

### UPPER DIVISION

| | Units |
|---|---|
| Education L100A-L100B, Methods and Materials of Instruction | 6 |
| Education 102A, Measurements in Education | 3 |
| Education 102B, Child Growth and Development | 3 |
| Education 115B, Secondary Education | 3 |
| Education L116, Directed Teaching | 6 |
| Health Education 151, Health Education | 2 |
| Political Science 101, American Institutions (or substitute) | 2 |
| Physical Education: | |
| L153, Principles and Administration of Secondary Physical Education | 3 |
| L155, Applied Anatomy | 3 |
| L157A-L157B, Sports Methods | 4 |
| L160, Principles of Teaching Gymnastics | 2 |
| L161, Folk Dancing | 2 |
| L164A-L164B, Methods in Modern Dance | 4 |
| L169, Technique of Teaching Activities | 2 |
| 170, Recreational Leadership | 2 |
| L177, Individual Program Adaptations | 2 |
| L185, Techniques of Individual Sports | 1 |
| Electives, including minor | 10 |
| | 60 |

### SUMMARY

| | |
|---|---|
| Music 1A | 3 |
| Education L100A-L100B, 102A-102B, 115B, L116 | 21 |
| English | 6 |
| Health Education 2, 51, and 151 | 5 |
| [1] Natural Sciences (including Biology 10A-10B, and Zoology 8) | 12 |
| Physical Education teaching major | 31 |
| Political Science 101 | 2 |
| Psychology 1A | 3 |
| [1] Social Sciences (including Social Science 1A) | 12 |
| Speech Arts | 3 |
| Electives, including a minor | 22 |
| | 120 |

**A.B. Degree With a Major in Speech Arts.** The college is authorized to grant an A.B. degree with a major in Speech Arts. Upon the satisfactory completion of the following curriculum the college will recommend that the Division of Credentials of the State Department of Education grant its graduates the Special Secondary Credential in Speech Arts. A scholarship average of C or better is required in all Speech Arts courses.

### LOWER DIVISION

| | Units |
|---|---|
| Speech Arts 1A-1B or 1C-1D or 60 | 6 |
| Speech Arts 55A-55B or 55C-55D | 6 |
| Speech Arts 63A-63B, Verse Choir | 1 |
| [1] Natural Sciences | 12 |
| [1] Social Sciences (including Social Science 1A) | 12 |
| Electives and Minor | 8 |
| Psychology 1A, General | 3 |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| English L1A, 1B, or 1C and 3 units from 30A-30B, 52A-52B, 56A-56B | 6 |
| Physical Education L1A, L1B, L1C and L3A or L11A | 2 |
| Aesthetics 1A or 5 | 2 |
| | 60 |

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[1] See lower division requirements, page 18.

### UPPER DIVISION

| | Uni |
|---|---|
| Health Education 151, Health Education | 2 |
| Education L100A-L100B, Methods and Materials of Instruction | 6 |
| Education 102A, Measurement in Education | 3 |
| Education 102B, Child Growth and Development | 3 |
| Education 115B, Secondary Education | 3 |
| Education L116, Directed Teaching | 6 |
| Political Science 101, American Institutions | 2 |
| Minor | 6 |
| Speech Arts 155A-155B or 156A-156B | 6 |
| Speech Arts 163 | 3 |
| Speech Arts 150, Phonetics | 2 |
| Speech Arts Electives | 9 |
| Electives to include 6 units from P. E. L164A or L12A; English 152A-152B; Eng. 110, 116B, 117A-B; or upper division courses offered in both English and Speech Arts | 8 |
| | 60 |

### SUMMARY

| | |
|---|---|
| Aesthetics 1A or 5 | 2 |
| Education L100A-L100B, 102A-102B, 115B, L116 | 21 |
| English | 6 |
| Health Education | 4 |
| [1] Natural Sciences | 12 |
| Physical Education | 2 |
| Psychology 1A | 3 |
| [1] Social Sciences (including Social Science 1A) | 12 |
| Speech Arts | 33 |
| Political Science 101, American Institutions (or substitute) | 2 |
| Electives, including teaching minor | 23 |
| | 120 |

**Special Credential in Correction of Speech Defects.** The credential is available t graduate students who have successfully completed two years of teaching in any fiel Specialized courses are required for certification plus a total of 100 hours of clinica experience in the treatment of articulatory and nervous disorders of speech.

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[1] See lower division requirements, page 18.

# PROFESSIONAL AND PREPROFESSIONAL CURRICULA

*Professional and preprofessional courses, ranging in length from two years to three and four years of collegiate work, are offered. The following curricular outlines meet typical requirements for admission to professional schools of law, medicine, dentistry, nursing, pharmacy, optometry, social service, public service, journalism, agriculture, and engineering. The student should modify these suggested outlines of study whenever the peculiar requirements of the professional school of his choice makes it seem advisable for him to do so.*

*The degree curricula in liberal arts may be modified to include the course outlines which follow. For a complete statement of the requirements for the junior certificate and the degree see page 17 and following pages.*

## Prelegal Curriculum

**The entrance requirements of law colleges range from two years to three and four years of prelegal work. The lower division requirements of the liberal arts curricula should be met in full whether the curriculum extends over a period of two, three, or four years.**

The following curriculum meets the recommendations of standard American law colleges for a broad and liberal education in those fields of human knowledge commonly involved in human affairs and those which have cultural and disciplinary values. For the majority of prelegal students a general major with concentration in economics, as provided for in the following curriculum, furnishes the most effective preparation for later professional study in law and for later activities in the field of business. However, for some students a major, or at least strong minors, in English, history, or political science, may provide a suitable preparation.

The high school program should include the following subjects: elementary algebra, 1 unit (2 semester credits); plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language, 3 units in one language or 2 units in each of two languages.
Following is a recommended arrangement of courses:

| FRESHMAN YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education 1 or 2 | -- | 2 |
| *Foreign Languages (if needed to complete requirement) | 0–5 | 0–5 |
| *Natural Science | 3–5 | 3–5 |
| *English | 3 | 3 |
| Economics 14A-14B | 3 | 3 |
| Psychology 1A | 3 | -- |
| Elective[1] | 0–3 | 0–4 |
| | 15½ | 15½ |

| SOPHOMORE YEAR | | |
|---|---|---|
| Physical Education | ½ | ½ |
| *Additional Natural Science (if needed to meet requirement) | 3 | -- |
| Economics 1A-1B | 3 | 3 |
| Philosophy 3A-3B, 5A-5B, or Mathematics 3A-3B | 3 | 3 |
| Political Science 1A-1B or 71A-71B | 3 | 3 |
| Elective[1] | 3 | 6 |
| | 15½ | 15½ |

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* See lower division requirements, page 17.

[1] Recommended elective: History, 6 units, taken in the freshman or sophomore year.

| JUNIOR YEAR | Units | |
|---|---|---|
| Economics 121 | 3 | -- |
| Economics 133 | 3 | -- |
| Economics Elective[2] | -- | |
| History 151A-151B or 175A-175B | 3 | |
| Political Science 111 and 113 or 143A-143B | 3 | |
| Sociology 105, 106 | 3 | |
| Elective[3] | 3 | |
| | 15 | 1 |

| SENIOR YEAR | | |
|---|---|---|
| Economics 100A | 3 | -- |
| Economics Electives[2] | -- | |
| History 111A-111B or 121A-121B | 3 | |
| Political Science 175A-175B | 3 | |
| Elective[3] | 6 | |
| | 15 | 15 |

## Preoptometry Curriculum

The high school program should include the following subjects: elementary agebra (year) unit; plane geometry, 1 unit; algebraic theory, 1 unit; trigonometry, ½-unit physics, 1 unit; chemistry, 1 unit; foreign language, 3 units.

The following curriculum prepares for junior standing in university schools optometry:

| FRESHMAN YEAR | Units | |
|---|---|---|
| Physical Education | ½ | |
| Health Education 1 or 2 | 2 | -- |
| *Foreign Language (if needed to complete requirements) | 3 | 3 |
| Physics 2A-2B | 3 | 3 |
| Physics 3A-3B | 1 | 1 |
| Psychology 1A | 3 | -- |
| Speech Arts 1A-1B | 3 | 3 |
| Social Science 1A | -- | 3 |
| Elective | -- | 3 |
| | 15½ | 16 |

| SOPHOMORE YEAR | | |
|---|---|---|
| Physical Education | ½ | |
| Chemistry 1A-1B | 5 | 5 |
| Mathematics 3A-3B | 3 | 3 |
| *Social Science | 3 | 3 |
| Physiology 1A and 1C[1] | -- | 5 |
| Elective | 4 | -- |
| | 15½ | 16 |

## Premedical Curriculum

The entrance requirements of medical colleges ordinarily range from three to fou years of premedical work. The lower division requirements of the Liberal Arts cur ricula include the general requirements of standard medical colleges and shoul therefore be met in full whether the curriculum extends over a period of three or of fou years. However, a student who has definitely decided not to become a candidate fo a degree in San Diego State College may substitute the lower division requirements of the institution to which he expects to transfer in place of the following courses marked with an asterisk. All plans for premedical work should include an arrangement of courses to meet the requirements of the medical college which the student expects to enter.

A student who is pursuing a four-year premedical curriculum should major in chemistry or zoology in his junior and senior years, and must meet all upper division requirements for the A.B. degree in the Liberal Arts curricula.

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[1] If not available, Zoology 20 may be substituted.
[2] To be chosen from the following list: Economics 100B, 111, 131, 135, 150.
[3] Recommended electives: English, philosophy, psychology, economics.
* See lower division requirements, page 17.

The high school program should include the following subjects: elementary algebra, 1 (year) unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units. Two units of Latin are recommended.

Following is a recommended arrangement of courses:

| FRESHMAN YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education | 2 | -- |
| Chemistry 1A-1B | 5 | 5 |
| *English Composition | -- | 3 |
| **French or German (if needed to meet requirement)[2] | 0–5 | 0–5 |
| Psychology 1A | 3 | -- |
| Social Science 1A | -- | 3 |
| **Elective | 0–5 | 0–5 |
| | 15½ | 16½ |

| SOPHOMORE YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Zoology 1A-1B | 4 | 4 |
| Chemistry 7-8 | 3 | 3 |
| **Social Science Year Course | 3 | 3 |
| English Composition | 3 | -- |
| **Additional Year Course[3] | 3 | 3 |
| **Elective | -- | 3 |
| | 16½ | 16½ |

| JUNIOR YEAR | Units | |
|---|---|---|
| Political Science 101 | 2 | -- |
| Physics 2A-2B | 3 | 3 |
| Physics 3A-3B | 1 | 1 |
| Chemistry 105 | 3 | -- |
| Zoology 100 | -- | 3 |
| Zoology 100D | -- | 1 |
| Zoology 106 | 4 | -- |
| Electives | 2 | 5 |
| | 15 | 15 |

| SENIOR YEAR | Units | |
|---|---|---|
| Upper division requirements and electives for the major, the minors and the degree (see page 20) | 15 | 15 |
| | 15 | 15 |

## Prenursing Curriculum

A student who plans to complete a curriculum in nursing leading to a degree and a certificate in nursing in another collegiate institution should ascertain the lower division (junior certificate) requirements of that institution. The lower division requirements of the institution to which the student will transfer may be substituted for the following courses marked with an asterisk wherever the requirements differ.

The high school program should include the following subjects: elementary algebra, 1 (year unit); plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units; domestic science (foods), 1 unit; 2 units of Latin are recommended. The following is a recommended arrangement of courses:

| FRESHMAN YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education | -- | 2 |
| Chemistry 2A-2B | 3 | 3 |
| Psychology 1A | 3 | -- |
| *English Composition | 3 | 3 |
| **French or German (if needed to complete requirement) | 0–5 | 0–5 |
| Social Science 1A | -- | 3 |
| **Elective | 0–6 | 0–5 |
| | 15½ | 16½ |

| SOPHOMORE YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Psychology 1B | 3 | -- |
| Economics 1A-1B | 3 | 3 |
| Bacteriology 1 | 4 | -- |
| **Additional Year Course | 3 | 3 |
| Physiology 1A, 1C | -- | 5 |
| Zoology 8 | 3 | -- |
| Elective | -- | 4 |
| | 16½ | 15½ |

---

[1] If not available, Zoology 20 may be substituted.

[2] German if the major is Chemistry.

[3] Mathematics 3A-3B or satisfactory substitute if the major is Chemistry.

* Chosen from English 1B and 2A, 2B, 2C, 2D, 2E, 2F.

** See lower division requirements, page 17.

## Predental Curriculum

Candidates for a degree in dentistry should ascertain the entrance requirements of th dental college to which they expect to transfer and should make whatever changes in the following typical requirements that may seem desirable in satisfying the requirements of the dental college.

The high school program should include the following subjects: elementary algebra, 1 (year) unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; foreign language, 3 units in one language.

The following arrangement of courses is recommended:

| FRESHMAN YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education | -- | 2 |
| Chemistry 1A-1B | 5 | 5 |
| *English | 3 | 3 |
| Psychology 1A | 3 | -- |
| **Foreign language (if needed to complete requirement) | 0–5 | 0–5 |
| **Elective | 0–5 | 0–5 |
| | 16½ | 15½ |

| SOPHOMORE YEAR | Unit | |
|---|---|---|
| Physical Education | ½ | ½ |
| Chemistry 7-8 | 3 | 3 |
| Physics 2A-2B or Zoology 1A-1B | 3–4 | 3–4 |
| **Social Science Year Course | 3 | 3 |
| **Social Science 1A | 3 | -- |
| **Additional Year Course | 3 | 3 |
| Elective | -- | 3 |
| | 15½ | 16½ |

## Preagricultural Curricula

The high school program should include the following subjects: elementary algebra 1 (year) unit; plane geometry, 1 unit; algebraic theory, 1 unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing 1 unit; foreign language, 3 units in one language.

Students should ascertain the lower division requirements of the agricultural college they expect to enter.

The following arrangement of courses is recommended:

### Curriculum in Plant Science

| FRESHMAN YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education | 2 | -- |
| Chemistry 1A-1B | 5 | 5 |
| Botany 2A-2B | 4 | 4 |
| Physics 2A-2B | 3 | 3 |
| Elective[1] | 2 | 3 |
| | 16½ | 15½ |

| SOPHOMORE YEAR | | |
|---|---|---|
| Physical Education | ½ | ½ |
| Economics 1A-1B | 3 | 3 |
| Chemistry 7-8 | 3 | 3 |
| Geology 1A or 2A | 3 | -- |
| Bacteriology 1 | -- | 4 |
| Zoology 1A | 4 | -- |
| Elective[1] | 3 | 5 |
| | 16½ | 15½ |

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[1] Foreign language if not completed in high school.

* Chosen from English 1B and 2A, 2B, 2C, 2D, 2E, 2F.

** See lower division requirements for junior standing (junior certificate) page 17.

### Curriculum in Animal Science

#### FRESHMAN YEAR

| | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education | 2 | -- |
| Chemistry 1A-1B[1] | 5 | 5 |
| Zoology 1A-1B | 4 | 4 |
| Physics 2A-2B | 3 | 3 |
| Geology 2B | -- | 3 |
| Elective[2] | 2 | -- |
| | 16½ | 15½ |

#### SOPHOMORE YEAR

| | | |
|---|---|---|
| Physical Education | ½ | ½ |
| Economics 1A-1B | 3 | 3 |
| Chemistry 7-8 | 3 | 3 |
| Bacteriology 1 | 4 | -- |
| Botany 2A | 4 | -- |
| Zoology 100 | -- | 3 |
| Zoology 20 or 8 | -- | 3 |
| Elective[2] | 2 | 3 |
| | 16½ | 15½ |

### Curriculum in Forestry

#### FRESHMAN YEAR

| | | |
|---|---|---|
| Physical Education | ½ | ½ |
| Chemistry 1A-1B[1] | 5 | 5 |
| Botany 2A-2B | 4 | 4 |
| English 1B and 2 * | 3 | 3 |
| Mathematics 3A-3B | 3 | 3 |
| | 15½ | 15½ |

#### SOPHOMORE YEAR

| | | |
|---|---|---|
| Physical Education | ½ | ½ |
| Physics 2A-2B, 3A-3B | 4 | 4 |
| Engineering 1A-1B | 3 | 3 |
| Economics 1A-1B | 3 | 3 |
| Geology 2A | 3 | -- |
| Chemistry 7 | 3 | -- |
| Elective[2] | -- | 6 |
| | 16½ | 16½ |

## Preengineering Curriculum

This curriculum is intended for students planning an intensive specialization in particular branches of engineering.

The high school program should include the following subjects: elementary algebra, 1 (year) unit; plane geometry, 1 unit; algebraic theory, 1 unit; solid geometry, ½ unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit.

Students should ascertain the requirements of the engineering college they expect to enter.

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[1] See prerequisites, page 62.
[2] Foreign language if not completed in high school.
* Chosen from English 2A, 2B, 2C, 2D, 2E, 2F or 2G.

## Mechanical, Electrical, Civil and Mining Engineering

FRESHMAN YEAR

| | Units | |
|---|---|---|
| Physical Education | ½ | |
| Health Education 1 | -- | |
| Mathematics 3A-3B | 3 | |
| Chemistry 1A-1B | 5 | |
| Physics 1A-1B | 3 | |
| †Geology 1A or elective | 4 | |
| Elective | -- | |
| | 15½ | 16 |

## Mechanical and Electrical Engineering

SOPHOMORE YEAR

| | | |
|---|---|---|
| Engineering 1A | 3 | -- |
| Engineering 21 | 3 | -- |
| Engineering 22 | -- | 3 |
| Engineering 23 | -- | 2 |
| Mathematics 4A-4B | 3 | 3 |
| Mathematics 118 or 119 | -- | 3 |
| Physical Education | ½ | |
| Physics 1C-1D | 3 | 3 |
| Elective | 3 | 2 |
| | 15½ | 16 |

## Civil Engineering

SOPHOMORE YEAR

| | | |
|---|---|---|
| Astronomy 3 | -- | 2 |
| Engineering 1A-1B | 3 | 3 |
| Engineering 21 | 3 | -- |
| Engineering 23 | -- | 2 |
| Mathematics 4A-4B | 3 | 3 |
| Physical Education | ½ | |
| Physics 1C-1D | 3 | 3 |
| *Elective | 3 | 3 |
| | 15½ | 16½ |

## Curriculum in General Engineering

A four-year curriculum is available at San Diego State College leading to the A.B degree in General Engineering. The curriculum is designed to provide the studen with the fundamentals of an engineering and technical education without intensiv specialization. It is planned to provide considerable elective opportunities, which will enable the student to adapt the program to his particular needs, with emphasis on one branch of engineering training, science, or business.

All students with aptitude for professional engineering and the financial means are urged to complete the requirements for the degree in mechanical, electrical, or civil engineering in our state university or at some other institution having a standard engineering school. There is, however, an increasing need for college graduates in fields of engineering, engineering science, or business engineering, where an intensive specialized training is not necessary. Students with training in a general engineering curriculum may easily adapt their programs to provide preparation for work in various engineering fields, as the electrical, heating and ventilation, public utility, telephone, and aeronautical industries among many others. Preparation is also available for work in chemical engineering, engineering physics, and engineering economics. Students may also use this curriculum as an undergraduate preparation for additional work in certain graduate engineering colleges. Students who desire to prepare for teaching of engineering and allied subjects in the secondary schools and the junior col-

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* Certain upper division engineering courses may be chosen to advantage by properly qualified students.

† Geology 1A is required in the civil engineering curriculum.

leges may use this curriculum, along with certain courses in education, to satisfy the undergraduate requirements for the general secondary credential.

The curriculum is not a specialized sequence of course work in specific engineering fields. If such specialized training is desired in the engineering fields, transfer to various colleges offering such work is recommended after completion of the lower division.

The high school program should include the following subjects: elementary algebra, 1 (year) unit; plane geometry, 1 unit; algebraic theory, 1 unit; solid geometry, ½ unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit.

### LOWER DIVISION

All college requirements for the A.B. degree must be met except foreign language.

| FRESHMAN YEAR | Units |
|---|---|
| Chemistry 1A-1B | 10 |
| Physics 1A-1B | 6 |
| Mathematics 3A-3B | 6 |
| English Composition | 3 |
| Social Science 1A | 3 |
| Health Education | 2 |
| Physical Education | 1 |
| Psychology 1A | 3 |
| | 34 |

| ** SOPHOMORE YEAR | Units |
|---|---|
| English Composition | 3 |
| Physics 1C-1D | 6 |
| Mathematics 4A-4B | 6 |
| Electives chosen from the following | 9 |
| Engineering 1A-1B | |
| Engineering 21 | |
| Engineering 22 | |
| Geology 1A | |
| Chemistry 7-8 | |
| *Social Science | 6 |
| Physical Education | 1 |
| | 31 |

### UPPER DIVISION

During the first semester of his junior year the student must prepare and submit for approval of his advisors a tentative program for the remainder of his undergraduate work.

Complete lower division requirements. (See page 17.)
Political Science 101.

Complete the following major in General Engineering: a total of 36 upper division coordinated units in three departments chosen from the following list (not more than 15 units may be chosen from one department).

The organization of the program of each major student must follow a definite plan approved by the proper advisors. Additional courses will be added from time to time. Required of all students (20 units):

| | Units |
|---|---|
| Engineering 100A-100B, Electrical Engineering | 6 |
| Engineering 105, Hydraulics | 3 |
| Engineering 123, Materials of Engineering Construction | 2 |
| Engineering 128 Heat Power Engineering | 3 |
| Physics 105A-105B, Analytical Mechanics | 6 |

Electives: 16 units, of which at least 6 units must be chosen from one of the following departments: chemistry, geology, astronomy, mathematics, or economics.

| | |
|---|---|
| Chemistry 110A-110B, Physical | 6 |
| Chemistry 105A, Quantitative Analysis | 3 |
| Chemistry 112A-112B, Industrial Chemistry | 6 |
| Chemistry 144, Industrial Analysis | 3 |
| Physics 110A, Adv. Electricity | 3 |
| Physics 110B, Electromagnetism-electronics | 3 |
| Physics 107A-107B, Electrical Measurements | 2 |
| Physics 108, Modern Physics | 3 |

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* Recommended Economics 1A-1B.
** See lower division requirements, page 17.

| | |
|---|---|
| Physics 112, Advanced Heat-Thermodynamics | 3 |
| Physics 112L, Heat-Pyrometry Lab. | 1 |
| Physics 114, Acoustics | 3 |
| Geology 100, Structural Geology | 3 |
| Geology 101, Problems in Geology | 4 |
| Astronomy 100, Navigation-Astronomy | 3 |
| Astronomy 107, Least Squares | 3 |
| Mathematics 118, Advanced Calculus | 3 |
| Mathematics 119, Differential Equations | 3 |
| Mathematics 124, Vector Analysis | 3 |
| Mathematics 140, Probability-Statistics | 3 |
| Economics 107, Credit and Credit Institutions | 3 |
| Economics 121, Business Administration | 3 |
| Economics 123, Principles of Marketing | 3 |
| Economics 131, Public Finance and Taxation | 3 |
| Economics 133, Corporation Finance | 3 |
| Economics 135, Money and Banking | 3 |
| Economics 140, Statistical Methods | 3 |
| Economics 150, Labor Problems and Industrial Relations | 4 |
| Economics 171, Transportation | 3 |
| Industrial Economics | 3 |
| (Economics 14A-14B recommended) | |

A student who desires to satisfy the undergraduate requirements for the general secondary teaching credential should include in his upper division work, in addition to the engineering major, certain courses in education which will partially satisfy the credential requirements. In order to conform to the usual university requirements this work should be chosen from Education 102A-102B and Education 115A-115B. Consultation with the Dean of Education or the Dean of Liberal Arts is recommended.

## Public Service Curricula—Public Administration

As the vocational demand for students of public administration is comparatively limited the student of public administration will do well to prepare himself also for a related field of work for which there is not only a cultural but also a vocational demand. The candidate for a public administrative position who is equipped for a career in a professional, scientific or technical field that is common to both public and private enterprise has a distinct advantage. The special courses in public administration listed in the following curriculum are supplementary courses designed for exploration and orientation. The curriculum as a whole provides for a major in economics, outlines a general preparation for the public service in social science fields and furnishes a basis for more highly specialized graduate courses in the field of public administration.

The high school program should include the following subjects: elementary algebra, 1 (year) unit; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language, 3 units in one language.

The following arrangement of courses is recommended:

| FRESHMAN YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education 1 or 2 | -- | 2 |
| *English | -- | 3 |
| *Foreign Language (if needed to complete requirements | 0–5 | 0–5 |
| Psychology 1A | 3 | -- |
| *Natural Science | 3–5 | 3–5 |
| Economics 14A-14B | 3 | 3 |
| Elective | 0–5 | 0–4 |
| | 16½ | 15½ |

| SOPHOMORE YEAR | Units | |
|---|---|---|
| *English | 3 | -- |
| Physical Education | ½ | ½ |
| *Additional Natural Science (if needed to meet requirements) | -- | 3 |
| *Additional year course | 3 | 3 |
| Economics 1A-1B | 3 | 3 |
| Political Science 1A-1B or 71A-71B | 3 | 3 |
| Elective | 4 | 3 |
| | 16½ | 15½ |

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* See lower division requirements, page 17.

| JUNIOR YEAR | Units | |
|---|---|---|
| Economics 100A | 3 | -- |
| Economics 140 | 3 | -- |
| Economics 100B | -- | 3 |
| Economics 131 | -- | 3 |
| Political Science 175A-175B | 3 | 3 |
| Elective[1] | 6 | 6 |
| | 15 | 15 |

| SENIOR YEAR | Units | |
|---|---|---|
| Economics 150 | -- | 3 |
| Economics 107, 133, 135, 171 | 3 | -- |
| Economics electives | 3 | 3 |
| Political Science 143A-143B | 3 | 3 |
| Elective[1] | 6 | 6 |
| | 15 | 15 |

## Public Service Curricula—Clerical and Fiscal Service

The curriculum in Clerical and Fiscal Service leads to the A.B. degree with a major in commerce. It outlines a course of training for clerical and clerical-executive service in accounting and auditing, budgeting, statistical work and miscellaneous financial and fiscal work.

The high school program should include the following subjects: elementary algebra, 1 (year) unit; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language, 3 units in one language.

| FRESHMAN YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education 1 or 2 | 2 | -- |
| *English Composition | -- | 3 |
| *Foreign Language (if needed to complete requirement of 10 units) | 0–5 | 0–5 |
| *Natural Science | 3–5 | 3–5 |
| Mathematics C and Economics 2 | 3 | 3 |
| Psychology 1A | 3 | -- |
| Elective | 0–5 | 0–6 |
| | 16½ | 15½ |

| SOPHOMORE YEAR | Units | |
|---|---|---|
| *English Composition | 3 | -- |
| Physical Education | ½ | ½ |
| *Additional Natural Science (if needed to meet requirements) | -- | 3 |
| Economics 1A-1B | 3 | 3 |
| Economics 14A-14B | 3 | 3 |
| Political Science 1A-1B or 71A-71B | 3 | 3 |
| Elective[2] | 4 | 3 |
| | 16½ | 15½ |

| JUNIOR YEAR | Units | |
|---|---|---|
| Economics 121 | 3 | -- |
| Economics 131 | -- | 3 |
| Economics 140 | 3 | -- |
| Economics 160A-160B | 3 | 3 |
| Political Science 101 | 2 | -- |
| Elective[3] | 4 | 9 |
| | 15 | 15 |

| SENIOR YEAR | Units | |
|---|---|---|
| Economics 161 | 3 | -- |
| Economics 167 | -- | 3 |
| Economics Elective | -- | 3 |
| Political Science 143A-143B | 3 | 3 |
| Elective[3] | 9 | 6 |
| | 15 | 15 |

## Public Service Curricula—Social Work

The professional curriculum in social service prepares for admission to graduate work in recognized American schools of social work. This curriculum should be pursued by those who plan careers in Federal, State and local welfare work; social work in public schools including preparation for a teaching credential; family and children's private case work agencies; social settlement work; county probation work; child welfare agencies; statistical and investigational work in private and public agencies; work in public institutions for the defective and delinquent; medical social service and psychiatric social work in hospitals and clinics; executive positions in social work; and social work in numerous other organizations.

The lower division requirements of the Liberal Arts curricula include the general requirements of recognized professional schools of social work and should therefore

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* See lower division requirements, page 17.

[1] See minor requirements, page 20. Students who desire to prepare for a graduate major in political science should elect Political Science 111 and 113 and may satisfy requirements for a major in economics by substituting Political Science 143A-143B for elective courses in economics.

[2] Recommended electives: Economics 18A-18B and Secretarial Training 3A.

[3] See minor requirements, page 20.

ordinarily be met in full. However, a student who has definitely decided not t become a candidate for a degree in San Diego State College may substitute the lowe division requirements of the institution to which he expects to transfer whereve the requirements differ.

A student who pursues a four-year curriculum in San Diego State College shoul major in Social Science and minor in Psychology.

The following subjects should be completed in high school: elementary algebra, (year) unit; plane geometry, 1 unit; algebraic theory, 1 unit; foreign language, units in one language.

Following is a recommended arrangement of courses:

| FRESHMAN YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education 1 or 2 | -- | 2 |
| Biology 10A-10B | 3 | 3 |
| *Foreign Language (if needed to complete requirement) | 0–5 | 0–5 |
| Psychology 1A | 3 | -- |
| *Speech Arts 1A-1B or *English elective | 3 | 3 |
| Elective[1] | 1–6 | 2–7 |
| | 15½ | 15½ |

| SOPHOMORE YEAR | Unit | |
|---|---|---|
| Physical Education | ½ | |
| Economics 1A-1B | 3 | 3 |
| Political Science 1A-1B or 71A-71B | 3 | 3 |
| *Additional Year Course | 3 | 3 |
| *Additional Natural Science (if needed to meet requirement) | 3 | -- |
| Sociology 50A | 3 | -- |
| Sociology 50B | -- | 3 |
| Elective[1] | -- | 3 |
| | 15½ | 15 |

| JUNIOR YEAR | Units | |
|---|---|---|
| Economics 100B or 131 or 150 | -- | 3 |
| Sociology 105 | 3 | -- |
| Sociology 109 | -- | 3 |
| Psychology 150 | 3 | -- |
| Psychology 151 | -- | 3 |
| Zoology 114A | 2 | -- |
| Political Science 101 | 2 | -- |
| Elective[2] | 5 | 6 |
| | 15 | 15 |

| SENIOR YEAR | Units | |
|---|---|---|
| Economics 140 | 3 | -- |
| Sociology 197 | 3 | -- |
| Sociology Elective | -- | 3 |
| Psychology 145 | 3 | -- |
| Political Science 143A-143B or restricted elective | 3 | 3 |
| Elective[2] | 3 | 9 |
| | 15 | 15 |

## Public Service Curricula—Inter-American Relations

The purpose of this curriculum is (1) to furnish a basis for a more intelligent and effective understanding of the opportunities and problems of international relations in the western hemisphere; (2) to provide facilities for a basic education and training for a business or professional career whch involves international relations.

Competition for opportunities of service in international affairs is severe. The student who plans a career in this field should therefore organize his electives to provide for a concentration in some area of work in which there are greater vocational opportunities. Preparation for employment as a foreign representative of an American business organization implies concentration in economics. The student who pursues this curriculum as a guide for training for the foreign service in consular, vice consular, secretarial, and other public offices should include additional courses in foreign language, history, political science, geography, and economics to furnish more effective preparation for the comprehensive competitive examinations required for appointment to the Service and for entrance to the Foreign Officers Training School at Washington, D. C.

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* See lower division requirements, page 17.

[1] Recommended electives: Economics 14A-14B, 6 units; Psychology 4A, 3 units.

[2] Recommended electives: Anthropology 152, 3 units; Economics 131, 150, 3 units each; History 171A-171B, 6 units; Sociology 106, 108, 198, 3 units each.

See minor requirements and U. S. Constitution requirement, page 20.

he proper faculty adviser should be consulted for revisions and additions to this rriculum to meet individual needs and objectives.

he high school program should include the following subjects: algebra, 1 (year) nit; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language, 3 units one language.

he following arrangement of courses is recommended:

| FRESHMAN YEAR | Units | |
|---|---|---|
| hysical Education | ½ | ½ |
| ealth Education 1 or 2 | 2 | -- |
| English | 3 | 3 |
| Spanish | 0–5 | 0–5 |
| Natural Science | 3–5 | 3–5 |
| istory 8A-8B | 3 | 3 |
| sychology 1A | 3 | -- |
| lective | 1–5 | 0–6 |
| | 15½ | 15½ |

| SOPHOMORE | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| *Additional Natural Science (if needed to meet requirements) | 0–3 | -- |
| *Additional year course (foreign language) | 3 | 3 |
| Economics 1A-1B | 3 | 3 |
| Political Science 1A-1B or 71A-71B | 3 | 3 |
| Geography 1 (Elements) | 3 | -- |
| Elective | 0–3 | 6 |
| | 15½ | 15½ |

| JUNIOR YEAR | Units | |
|---|---|---|
| olitical Science 141 | 3 | -- |
| olitical Science 142 | -- | 3 |
| istory 173A-173B | 3 | 3 |
| panish 104A-104B | 3 | 3 |
| lective[1] | 6 | 6 |
| | 15 | 15 |

| SENIOR YEAR | Units | |
|---|---|---|
| Economics 195 | 3 | -- |
| Economics 198 (Special Study—Western Hemisphere) | -- | 3 |
| History 161 | -- | 3 |
| History 163 | 3 | -- |
| Geography 116 | -- | 3 |
| Geography 121 | 3 | -- |
| Elective[1] | 6 | 6 |
| | 15 | 15 |

## ublic Service Curricula—Foreign Service

curriculum of training for the foreign service in consular, vice consular, and other ffices is available on request. This curriculum outlines preparation for competitive xaminations required for appointment to the Service and for entrance to the Foreign fficers' Training School at Washington, D. C.

## urriculum in Journalism

Courses in journalism have been discontinued until further notice.)

broad, cultural education, and specific information and understanding in fields with hich the journalist is largely concerned, are essential to an effective training for ournalism. Introductory training in the principles and practices of journalistic riting is offered only after a good foundation in correct speaking and writing of nglish has been laid.

ractical training in news reporting and editing for student publications and for the aily and weekly press is emphasized.

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* See lower division requirements, page 17.

[1] (a) Restricted electives: The social science major or the general major recom- ended. The social science major requires 24 units of upper division work, including a oncentration of 12 units in one social science and 6 units in each of two others. See lso minors requirement, page 20. The general major requires 36 units of upper divi- ion work in any three fields, subject to departmental approval. Not more than 15 units any field will be counted as part of the major. Minors requirement may be included the general major.

(b) Free electives—Recommended: Aesthetics 51 (Survey of Latin-American rt), Anthropology 151B (Middle American Indian), English 104 (Survey of Latin- merican Literature).

The high school program should include the following subjects: elementary algebra, (year) unit; plane geometry, 1 unit; foreign language, 3 units in one language; En lish, 4 units; natural science, 1 or 2 units in the junior or senior year.

Following is a recommended arrangement of courses:

| FRESHMAN YEAR | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education | -- | 2 |
| *English | 3 | 3 |
| History 4A-4B or 8A-8B or Political Science 1A-1B or 71A-71B | 3 | 3 |
| *Foreign Language (if needed to complete requirement) | 0-5 | 0-5 |
| Journalism 10A-10B | 1 | 1 |
| Psychology 1A | 3 | -- |
| Elective[1] | 0-5 | 1-6 |
| | 15½ | 15½ |

| SOPHOMORE | Units | |
|---|---|---|
| Physical Education | ½ | |
| Economics 1A-1B or Political Science 1A-1B or 71A-71B | 3 | |
| Journalism 51A-51B | 3 | |
| *Philosophy 5A-5B or 3A-3B (if needed to complete additional year course requirement) | 3 | |
| *Natural Science | 3 | 3 |
| **Social Science 1A | 3 | |
| *Elective | -- | 3 |
| | 15½ | 15 |

| JUNIOR YEAR | Units | |
|---|---|---|
| Major[3] (including English 112) | 9 | 9 |
| Journalism 151A-151B | 1 | 1 |
| Journalism[4] | 2 | 2 |
| Elective | 3 | 3 |
| | 15 | 15 |

| SENIOR YEAR | Units | |
|---|---|---|
| Major[3] | 9 | 9 |
| Journalism[4] | 2 | 2 |
| Journalism 199 | -- | 2 |
| Political Science 101 (if not included in the major) | 2 | |
| Elective | 2 | 2 |
| | 15 | 15 |

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* See lower division requirements for junior standing, page 17.

** Six units of Economics 1A-1B and 6 units of Political Science 1A-1B or 71A-71 may be substituted for Social Science 1A.

[1] Recommended electives: Aesthetics 1A-1B, 4 units; Aesthetics 5, 2 units; Anthropology 50A-50B, 6 units; Geography 2, 3 units; Sociology 50A- 50B, 6 units; Secretaria Training, L2A, or equivalent; Speech Arts 1A, 3 units.

[2] Recommended electives: Journalism 153A-153B, 2 or more units.

[3] The social science major or the general major recommended. The social scienc major requires 24 units of upper division work, including a concentration of 12 units i one social science and 6 units in each of two others. See also minors requirement, Bulletin page 20. The general major requires 36 units of upper division work in any thre fields, subject to departmental approval. Not more than 15 units in any field wil be counted as part of the major. Minors requirement may be included in the genera major. English and one or more social sciences are required for the general major i the curriculum in Journalism.

[4] Not more than 6 units of Journalism 153A-153B and L153A-L153B may b counted toward the A.B. degree and not more than 4 units of Journalism 153C-153I may be counted.

# TWO-YEAR COMPLETION CURRICULA

*These curricula are organized for students who have not yet qualified for enrollment in a four-year curriculum leading to the Bachelor of Arts degree. Regularly qualified students who prefer a shorter completion course will take only such two-year courses as may be required in the specialized curricula they are following. Upon satisfactory completion of the requirements in these two-year curricula the student is granted a diploma. By maintaining a high grade of scholarship the student may secure the opportunity of transfer to a four-year program. Such transfers are made by action of a faculty committee after the student has completed one or more semesters in a two-year curriculum. Upon transfer the credits earned in most courses in the two-year program in which grades of A and B have been received are allowed to count toward the Bachelor of Arts degree.*

*Courses numbered L40 and L45 are not open for credit to students in a four-year curriculum.*

*The following special courses are designed for students enrolled in a two-year completion curriculum: Astronomy L40; Biology L40; Economics L45A-L45B; English L40A, L40B, L45, L46; Geography L40A, L40B; Geology L40; Health Education L40; Mathematics L40A, L40B; Physical Science L40; Psychology L45; Social Science L40, L45; Sociology L40; Speech Arts L40.*

*Any other course designated by the prefix "L" (e.g. Art L7) is regularly open to students enrolled in a two-year completion curriculum. See Limited Electives, page 19. The following courses are also regularly open to two-year students: Aesthetics 1A, 1B, 2; Art 6A, 6B, 8A, 8B, 11A, 11B, L14A, 14B, 52A, 61B, 94A, B; Economics 15A-15B, 16A-16B, 65A-65B; Health Education 1, 2; Mathematics C, D, E, S; Merchandising (all courses); Music 1B, 11A, 11B, 11C, 11D, 12A, 12B, 12C, 12D, 13A, 13B, 13C, 13D, 15A, 15B, 15C, 15D, 20A, 20B, 20C, 20D, 26A, 26B, 26C, 26D, 27A, 27B; Secretarial Training (all courses).*

*A two-year student may elect any other college lower division subject under guidance where his high school scholarship record, or his scores in the aptitude and achievement tests, or his college record indicates probable success in that field. He must, of course, meet all prerequisites for the course under consideration.*

## Two-year Curriculum in Liberal Arts

| FIRST YEAR | Units Sem. I | Units Sem. II |
|---|---|---|
| English L40A or L40B or L40C | 3 | 3 |
| **Physical Science L40 or equivalent | -- | 3 |
| **Biology L40 or equivalent | 3 | -- |
| Social Science L40 | 3 | -- |
| Sociology L40 | -- | 3 |
| Health Education 1 or 2 | -- | 2 |
| Physical Education | ½ | ½ |
| Psychology L40 | 3 | -- |
| *Elective | 3 | 4 |
| | 15½ | 15½ |

| SECOND YEAR | Units Sem. I | Units Sem. II |
|---|---|---|
| Speech Arts L40 or English L45 | 3 | -- |
| Social Science (Economics L45A, Geography L40B, Merchandising L20, or Social Science Elective*) | 3 | -- |
| Social Science L45 | -- | 3 |
| *Elective | 9 | 12 |
| Physical Education | ½ | ½ |
| | 15½ | 15½ |

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* See foregoing list in italics.
** Not less than 6 units of natural science must be completed in college.

## Two-year Curriculum in Art

| | Units | Units |
|---|---|---|
| FIRST YEAR | Sem. I | Sem. II |
| English L40A, or L40B | 3 | -- |
| English L40C | -- | 3 |
| Social Science L40 | 3 | -- |
| Biology L40 or equivalent | -- | 3 |
| Psychology L40 | 3 | -- |
| Health Education 1 or 2 | -- | 2 |
| Art 6A-6B | 2 | 2 |
| Aesthetics 5 or equivalent | -- | 2 |
| Art A-B or equivalent | 2 | 2 |
| Physical Education | ½ | ½ |
| *Elective | 2 | 1 |
| | 15½ | 15½ |

| | Units | Unit |
|---|---|---|
| SECOND YEAR | Sem. I | Sem. I |
| Physical Science L40 or equivalent | 3 | -- |
| Social Science L45 | -- | 3 |
| [1] Art Electives | 9 | 9 |
| Physical Education | ½ | |
| *Elective | 3 | 3 |
| | 15½ | 15 |

## Two-year Curriculum in Music

| | Units | Units |
|---|---|---|
| FIRST YEAR | Sem. I | Sem. II |
| English L40A or L40B | 3 | -- |
| English L40C | -- | 3 |
| Social Science L40 or equivalent | 3 | -- |
| Psychology L40 | -- | 3 |
| Health Education 1 or 2 | -- | 2 |
| Music L1A-1B or equivalent | 3 | 3 |
| Aesthetics 1A-1B | 2 | 2 |
| *Music Elective | 1 | 1 |
| Applied Music | 0–1 | 0–1 |
| Physical Education | ½ | ½ |
| *Elective | 2–3 | 1–2 |
| | 15½ | 15½ |

| | Units | Units |
|---|---|---|
| SECOND YEAR | Sem. I | Sem. I |
| Physical Science L40 or equivalent | 3 | -- |
| Biological Science L40 | -- | 3 |
| Social Science L45 | -- | 3 |
| *Speech Arts or Foreign Language | 3 | 3 |
| *Music 4A-4B or approved substitute | 3 | 3 |
| Applied Music | 1–2 | 1–2 |
| *Elective (including at least 2 units of music) | 4–5 | 1–2 |
| Physical Education | ½ | ½ |
| | 15½ | 15½ |

## Two-year Curriculum in Accountancy

| | Units | Units |
|---|---|---|
| FIRST YEAR | Sem. I | Sem. II |
| Economics L15A-L15B | 3 | 3 |
| English L8 | -- | 3 |
| English Elective* | 3 | -- |
| Secretarial Training LA | 1 | -- |
| Secretarial Training L1A-L1B | 3 | 3 |
| Health Education 1 or 2 | -- | 2 |
| **Physical Science L40 or equivalent | 3 | -- |
| **Biological Science L40 or equivalent | -- | 3 |
| *Elective | 3 | -- |
| Physical Education | ½ | ½ |
| | 16½ | 15½ |

| | Units | Units |
|---|---|---|
| SECOND YEAR | Sem. I | Sem. II |
| Economics L65A-L65B | 3 | 3 |
| Merchandising L20 | 3 | -- |
| Merchandising L24B | -- | 3 |
| Secretarial Training L3A | 3 | -- |
| Economics 18A-18B | 3 | 3 |
| **Economics L45A-L45B | 3 | 3 |
| Social Science L45 | -- | 3 |
| *Elective | -- | 1 |
| Physical Education | ½ | ½ |
| | 15½ | 16½ |

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[1] Art Elective: Art 8A-8B, 7, 11A-11B, 14A-14B, 15A-15B, 16A-16B, 52A, 94.

* See list in italics on page 49.

** Students qualified for regular four-year standing should take the equivalent course provided for regular students.

## wo-year Curriculum in Prenursing

two-year course is available for students planning to enter nurses training. Further information may be secured from the Registrar's office.

## wo-year Curriculum in Secretarial Training

| FIRST YEAR | Units Sem. I | Units Sem. II |
|---|---|---|
| conomics L16A-L16B | 3 | 3 |
| ecretarial Training LA | 1 | -- |
| nglish L8 | 3 | -- |
| English Elective | -- | 3 |
| ecretarial Training L1A-L1B | 3 | 3 |
| ecretarial Training L5A-L5B | 5 | 5 |
| ealth Education 1 or 2 | -- | 2 |
| hysical Education | ½ | ½ |
| | 15½ | 16½ |

| SECOND YEAR | Units Sem. I | Units Sem. II |
|---|---|---|
| **Physical Science L40 or equivalent | 3 | -- |
| **Biological Science L40 or equivalent | -- | 3 |
| Economics 18A-18B | 3 | 3 |
| **Economics L45A-L45B | 3 | 3 |
| Secretarial Training L6A-L6B | 3 | 3 |
| Secretarial Training L3A | 3 | -- |
| Social Science L45 | -- | 3 |
| Physical Education | ½ | ½ |
| | 15½ | 15½ |

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* See list in italics on page 49.

** Students qualified for regular four-year standing should take the equivalent ourse provided for regular students.

# JUNIOR COLLEGE COMPLETION CURRICULA

In cooperation with the San Diego City Schools one specialized division of the Junior College program is maintained on this campus. This center endeavors serve young people who, because of ill health, indefinite objectives, inadequate stud habits or other reason, have achieved less in high school than they had hoped to d Students admitted to this center frequently have no clearly defined vocational an educational objectives or they have set up goals which are too difficult to attain.

The program in this center has the following characteristics:

a. Every course has been developed with the aim of meeting the needs of th type of student admitted. All courses are planned, therefore, to includ materials of immediate interest to the student. The content and the pr cedures used are designed to help the student get answers to his question about himself, about his plans, and about his understanding of and happ adjustment to the world about him.

b. The program gives vocational help, but does not provide vocational course While the primary purpose is not vocational training, much of the wor contributes toward this end. Both the guidance program and the courses study are planned to help the student make his vocational adjustment.

c. The program is concerned primarily with general education. The ter "general education" is here used to designate those understandings, attitude and skills common to all adults who are to live effectively in America democracy.

d. Guidance is the principal focus of the program. It attempts specifically t meet the needs of each student through a well coordinated system of grou and individual guidance and a curriculum planned to aid in the adjustmen of the individual to his world.

e. The course is two years in length and upon its successful completion th degree of Associate in Arts is awarded by the San Diego City Board o Education.

No A.B. degree credit is given for these Junior College courses, although a student ma qualify for admission to San Diego State College through a demonstration of stron scholarship.

# COURSES OF INSTRUCTION

*igures in parentheses indicate the unit value of the course.*

*ourses numbered from 1 to 99 are lower division (freshman or sophomore) courses;
hose numbered 100 and above are upper division (junior or senior) courses. The
refix "L" is used to denote courses which are classified as limited electives for students
nrolled in the liberal arts curricula. See page 19. Students may not ordinarily apply
ore than a total of twelve units of credit, earned in courses so designated, toward the
equirements for the bachelor of arts degree. The prefix "E" indicates courses which
re offered through the Extension service, and "S" denotes courses which are available
uring the Summer Session.*

*reshmen are not admitted into upper division courses.*

*sophomore may enroll in an upper division course for lower division credit provided he
as earned an average grade of not less than 1.5 in all college work undertaken, and
rovided he receives the instructor's permission to enroll in the course. A second
emester sophomore may enroll in an upper division course for upper division credit
ithout the foregoing grade limitations provided the units earned in the upper divi-
ion course or courses are in excess of the sixty units required in the lower division.*

*ne "unit" represents an hour recitation or lecture, together with the required prepa-
ation, or three hours laboratory work each week for a semester of 18 weeks.*

*he semester in which courses are offered is designated as follows: (1) Fall; (2) Spring;
3) Fall and Spring; (4) Year course, beginning either Fall or Spring; (5) Year course.
ourses designated as "Year course" begin in the Fall, but those given in the list below
ay be taken in the reverse order (i.e., the second semester of the course may be taken
efore the first semester) or the second semester may be taken alone. In the case of
ther year courses, students who have completed the equivalent of the first semester's
ork may seek permission from the instructor to take the second half of the course.*

## Year Courses Open to Registration in the Middle of the Year

Aesthetics 1A-1B
Aesthetics 102A-102B
Anthropology 1A-1B
Anthropology 151A-151B
Economics 160A-160B
English 52A-52B
English 56A-56B
English 106A-106B
English 107A-107B
English 117A-117B
French 101A-101B
French 105A-105B
French 107A-107B
French 110A-110B
French 111A-111B
History 4A-4B
History 8A-8B
History 111A-111B
History 121A-121B
History 146A-146B
History 151A-151B
History 156A-156B
History 171A-171B
History 173A-173B
Political Science 1A-1B
Political Science 71A-71B
Political Science 175A-175B
Spanish 101A-101B
Spanish 102A-102B
Spanish 104A-104B
Spanish 105A-105B
Spanish 110A-110B
Speech Arts 55A-55B
Speech Arts 55C-55D
Speech Arts 155A-155B
Speech Arts 156A-156B

*lthough the College fully expects to carry out the arrangements planned in the list
f courses, it reserves the right to make changes. Classes in which the enrollment does
ot come up to the minimum number set by the State Department of Education may not
e offered or may be postponed.*

## AESTHETICS

### LOWER DIVISION COURSES

**1A-1B Survey of Music** **Springsto**

Correlation of music and other arts. Designed to stimulate enjoyment of music b developing intelligent listening. The elements of music, its structure, folk music all countries, musical instruments, and the contributions of the best known composer with some biographical study of these men. Compositions are presented by orthophoni recording and by class members. Attendance at a number of local concerts is require No previous musical training or background is necessary. Music majors are require to complete additional assignments for full credit.

*Year course (2-2)*

**5 Fundamentals of Art** **Jackso**

An illustrated lecture course involving a study of aesthetic meaning and its relation t the structure of art products. Designed to increase both understanding and appeciatio of the visual world in general and of the fine arts in particular.

*Fall and Spring (2)*

**50 Appreciation and History of Art** **Jackso**

A survey of aesthetics development as revealed in the painting, sculpture, architectur and handicrafts from dawn of art to the Renaissance. Illustrated.

*Fall (2)*

**51 Survey of Mexican Art** **Jackso**

A study of Mexican and Middle American Art from earliest time to present.

*Fall (2)*

### UPPER DIVISION COURSES

**102A-102B History of Music** **D. F. Smit**

The various movements in the development of music as related to the other arts. Th chronological development of the art of music, with particular emphasis on the large works. Considerable attention is given to the works of modern composers. Man symphonic works are studied from the orchestral scores. Music majors are require to complete additional assignments for full credit. Prerequisite: Aesthetics 1A or 1B

*Year course (2-2)*

**150 Appreciation and History of Art** **Jackso**

The period from the Renaissance through the modern school, treated in the sam manner as in Aesthetics 50.

*Spring (2)*

## ANTHROPOLOGY

*Lower division preparation for the liberal arts major in social science with concen tration in anthropology: Anthropology 50A-50B, Sociology 50A, 50B, Geography 1, 2 Recommended: Geology 1A-1B, Economics 1A-1B. See requirements for the socia science major, page 107.*

### LOWER DIVISION COURSES

**1A-1B General Anthropology** **Rogers**

Origin and antiquity of man. Theories of human descent. Classification of races. Origin and early development of civilization.

*Year course (3-3)*

**54 Social Anthropology**

An anthropological study of social institutions in primitive and civilized societies. The evolution of family organization, religion, property right, and government traced in elementary and advanced civilization.

*Spring (3) (Not offered 1944-45)*

**55 Culture History** **Rogers**

The prehistoric and historic development of culture types contributing to Western European and American civilization of today. Egyptian, Semitic, Indo-European, and Oriental cultures examined in light of their bearing on contemporary civilization. Methods of culture spread examined and applied to specific traits. Spengler's theory of history and similar doctrines reviewed.

*Fall (3) (Not offered in 1944-45)*

**56 Backgrounds of World Religions** **Rogers**

An introductory study of Judaism, Christianity, Islam, Buddhism and Shinto from the viewpoint of their anthropological development and their role as cultural forces. Concepts of Gods and spirits, rituals, ethical systems, and symbolism.

*Spring (3)*

### UPPER DIVISION COURSES

**151A The North American Indian** **Rogers**

Pre-Columbian cultures of the North American Indian. The origin and migration of New World peoples. Industries, arts, crafts, social organization, religion and other phases of American Indian civilization.

*Fall (3) (Not offered in 1944-45)*

**151B Indian Civilizations of Middle America** **Rogers**

The development of civilization in Pre-Columbian Mexico and Central America: Aztec, Mayan, and related cultures.

*Spring (3)*

**152 Primitive Cultures (Ethnography)** **Rogers**

History and cultural development of primitive races of mankind. Consideration given to industries, arts, social organization, and religion of preliterate culture groups.

*Fall (3) (Offered in 1944-45 and alternate years)*

**153 Primitive Religion** **Rogers**

Beliefs and ritual of primitive man. Magic and religion. Forms of animism and polytheism. Primitive mentality and the supernatural.

*Spring (3) (Offered in 1944-45 and alternate years)*

**157 Primitive Myths and Rituals** **Rogers**

The folklore, mythology, and rituals of primitive cultures in the Eastern Mediterranean area. The early beliefs and classic myths of the Egyptians, Assyrians, Babylonians, and Greeks.

*(Not offered 1944-45)*

## ART

Many students, regardless of the field in which they may be majoring, recognize the need for an intelligent approach to the subject of art and art appreciation. However, due to the erroneous popular feeling that art is so specialized a subject as to require "talent," these students may refrain from enrolling in any art courses.

For students who desire a better understanding of art, but who do not hope to acquire any of the art skills, the following courses are recommended:

| | Units |
|---|---|
| Aesthetics 5, Fundamentals of Art | 2 |
| Aesthetics 50, History and Appreciation of Art | 2 |
| Aesthetics 51, Survey of Mexican Art | 2 |
| Art 8A-8B, Appreciation of Costume and Home-furnishing | 4 |

Other courses which involve certain skills but which are not out of reach of the ability of the average college student are:

| | |
|---|---|
| Art 61B, Crafts | 2 |
| Art 6A, Art Structure | 2 |
| Art A, Freehand drawing | 3 |
| Art 94v, Costume design | 2 |

For students who might wish to complete a minor in art after having met the lowe division requirements from the preceding page, the following courses are recommende as not requiring any fundamental training in drawing and design:

| | |
|---|---|
| Art 119, Ceramics | 2 |
| Art 152A, Stage Design | 2 |
| Aesthetics 150, History and Appreciation of Art | 2 |

*Candidates for a teaching credential in art should refer to the statement "Admission to Teacher Education" on page 21.*

*Lower division preparation for the liberal arts major in art: Aesthetics 5 or 51, and 50; Art A-B and 6A-6B, or the accepted equivalents, and four elective units in art.*

*Liberal arts major (upper division): Twenty-four upper division units. These shall include Art 112A, 115A-115B, 152A, 195, or the accepted equivalent; Aesthetics 150. It is recommended that the students in meeting degree requirements and in choosing free electives, select from the following courses: Anthropology 151A-151B; English 106A-106B, 107A-107B, 117; French A-B; History 4A-4B, 111A-111B.*

For courses in Appreciation and History of Art and Fundamentals of Art, see Aesthetics, page 54.

## LOWER DIVISION COURSES

**A-B Freehand Drawing** **Jackson**

Semester I: Problems involving perspective to develop ability to draw still life, furniture, exteriors, interiors, and the like.

Semester II: Outdoor sketching of landscape and figure, and studio work from still life and costume pose. Emphasis on composition and technique in the handling of various mediums, pencil, pen and ink, charcoal, pastel, and water color.

*Year course (3-3)*

**6A Structure** **Patterson**

Fundamentals of design and composition and theory of color. Basic course used as a prerequisite for all advanced work.

*Fall and Spring (2)*

**6B Stucture** (continued) **Patterson**

Original work in creative design and representation with special stress on modern tendencies. Prerequisite: Art 6A.

*Fall and Spring (2)*

**L7 Line, Color and Display** **Patterson**

The principles of line, color and arrangement applied to store and window display. Study and observation of windows, color and materials used in display. Building models and practical problems in arranging colors, textures, and forms in windows to fit different kinds of merchandise.

*Fall and Spring (2) (Not offered in 1944-45)*

**8A-8B Appreciation of Costume and Home Furnishing** **Hamann**

8A A survey of the periods of costume and home furnishing from primitive man to the present time.

*Fall (2)*

8B Lectures, discussions, and demonstrations on the underlying principles of dress and home furnishing. (a) A study of the design, color, texture, fabric, and fashion in modern dress with emphasis on suitability to the figure, the personality and the occasion. (b) Line, form, color, texture, fabric, and lighting in relation to the home; the selection and arrangement of furniture, rugs, fabrics, pictures, etc., for all rooms of the home.

*Spring (2)*

**11A Industrial Design** **Hamann**

Original design in its relationship to various fields—ceramics, furniture, textiles, jewelry, and books. A survey and study of materials and processes in machine and hand production. Prerequisite: Art 6A-6B.

*Fall (2)*

**11B Advanced Industrial Design** **Hamann**

Advanced problems with emphasis upon the related factors of material and production. Application of problems designed. Prerequisites: Art 6A-6B, 11A.

*Spring (2)*

**L14A Lettering** **Hamann**

Fundamental art principles applied to lettering. Practice for quick, accurate lettering; original problems using letters as design. Prerequisite: Art 6A.

*Fall (2)*

**14B Posters and Commercial Art** **Hamann**

The application of lettering to posters, newspaper and magazine advertising, and other forms of commercial art. The study of composition combined with lettering and special study of modern tendencies in publicity. Prerequisites: Art 6A, 14A.

*Spring (2)*

**15A-15B Life Drawing** **Jackson**

Drawing from the nude model. Prerequisite: Art A-B.

*Year course, beginning either Fall or Spring (2-2)*

**16A-16B Painting** **Jackson**

Semester I: Composition of still life and flower forms in water color and oil. Semester II: Landscape and more advanced composition in water color and oil. Prerequisite: Art A-B.

*Year course, beginning either Fall or Spring (3-3)*

**52A Stage Design** **Patterson**

Theory of line, color, and lighting in relation to the stage. Original sets and costumes developed on a miniature stage. Study of the development of the modern art of the theater. Upper division credit will be given in this course to students of junior standing upon the completion of extra theme work and additional original problems. Prerequisite: Art 6A.

*Fall (2)*

**52B Stage Costume (See 152B)** **Patterson**

*Fall (2)*

**Art 61A Fine and Industrial Arts** **Hamann**

A foundation course which develops unification of work of the elementary grades through activities and experiences. These experiences grow out of environmental activities. They include study and working of clay, lumber and tools, textiles, and cardboard construction. Prerequisite: Art 6A.

*Fall and Spring (2)*

**61B Elementary Crafts** **Hamann**

Problems involving the application of design principles to various fields—pottery, textiles, weaving, metal work, wood-carving, and book-binding. Prerequisite: Art 6A.

*Fall and Spring (2)*

**94 Costume Design** **Patterson**

Original designs of modern costumes suitable to the individual or to distinct types; the drawing of fashion figures; the rendering of fabrics and textures. Prerequisite: Art 6A.

*Spring (2)*

**95 Home Decoration** *(See Art 195)* **Patterson**

UPPER DIVISION COURSES

**106A-106B Printmaking** **Haman**

Study of print crafts which includes the making of linoleum blocks, wood engraving etchings and lithographs. Prerequisites: Art A, B, 6A.

*Year course (2-2)*

**106C Illustration** **Haman**

Same as 106A-B except that printmaking is applied to problems of book illustratio Prerequisites: Art A, B, 6A.

*Spring (2) (Offered in 1942-43 and alternate years)*

**112A-112B Organization** **Jackso**

Imaginative organization of space by means of color, dark and light, perspective, an textures of various materials. Prerequisites: Art A-B, 6A-6B, and if possible 15A-15 or 106A.

*Year course (3-3)*

**115A-115B Life Drawing and Painting** **Jackso**

Drawing and painting from nude and costume models.

*Year course, beginning either Fall or Spring (2-2)*

**115C-115D Advanced Life** **Jackson**

Painting from nude and costume models and advanced composition in oil. Portraiture Prerequisite: Art 115A-115B.

*Year course, beginning either Fall or Spring (2-2)*

**116A-116B Advanced Painting** **Jackson**

Painting in water color and oils from still life and landscape, stressing composition and technique. Prerequisite: Art 16A-16B.

*Year course, beginning either Fall or Spring (3-3)*

**152A Stage Design** **Patterson**

See Art 52A.

**152B Stage Costume** **Patterson**

Costume studied in relation to drama, opera and dance. Original designs for mood and character. Practical problems in designing costumes and accessories for college productions. Prerequisites: Art 6A, 52A or 152A.

*Fall (2)*

**194 Costume Design** *(See Art 94)* **Patterson**

*Spring (2)*

**195 Home Decoration** **Patterson**

Lectures and designing in class, trips to art galleries, stores, factories and homes, studying how to recognize and choose the best in furniture, rugs, wall coverings, textiles and pottery as to design, color and materials. Actual experience in designing and arranging furnishings in homes and offices. Working with local stores and architects. Arrangement of flowers and objects for different types of rooms and occasions. Prerequisites: Art A, 6A.

*Spring (2)*

## ASTRONOMY

*Lower division preparation in Astronomy desirable for advanced work: Astronomy 1, 2, 3, and 9; Mathematics 3A-3B, 4A-4B; Physics 1A-1B and 1C-1D; a reading knowledge of French and German desirable.*

LOWER DIVISION COURSES

**1 Descriptive Astronomy** **Watson**

A cultural course planned to develop an appreciation of astronomy with special emphasis on the solar system. Only calculations of an elementary nature are used. Especial attention given to the methods and instruments by means of which astronomical knowledge has been gained. A six-inch John Byrne refractor and an eight-inch reflecting telescope are available for observation. Prerequisites: Elementary algebra and plane geometry.

*Fall (3)*

### 2 Modern Astronomy

A study of sidereal astronomy and astrophysics in the light of modern research, especially photographic and spectrographic. Prerequisite: Astronomy 1 and a knowledge of physics or permission of the instructor.

*Spring (3) (Not offered in 1944-45)*

### 3 Surveyor's Course in Practical Astronomy

The principles of spherical astronomy adapted to the needs of engineering students. Computation and observation. Prerequisites: Surveying 1A or permission of the instructor. Astronomy 1 and 9 desirable.

*Spring (2) (Not offered in 1944-45)*

### 9 Practice in Observing

A laboratory course designed particularly to go along with and to supplement Astronomy 1. The course will include constellation study, use of astronomical coordinates, elementary methods of determining time and latitude, and descriptive observations of celestial objects with the six-inch telescope. Prerequisite: Astronomy 1 or registration in Astronomy 1 or permission of the instructor.

*(Not offered in 1944-45)*

### 12 Elementary Navigation

A study of compass corrections, drift problems, time, line of position, use of celestial coordinates, Bowditch Tables, etc. A few class hours at the close of the term are devoted to the use of tables such as Ageton, Dreisonstok and H. O. 214 for the solution of astronomical triangle. Offered if demand is sufficient. Prerequisite: Astronomy 1 or permission of instructor.

*Spring (2) (Not offered in 1944-45)*

## UPPER DIVISION COURSES

### 100 Special Problems

Admission by consent of instructor. Credit and hours to be arranged in each case. Open to students who have completed three units in astronomy.

*Fall and Spring (1 or 2) (Not offered in 1944-45)*

### 105 Historic Development of Astronomy

A study of the more important problems and astronomical concepts in the light of their historical development. Particular attention is given to the biography and contributions of the more important astronomers, such as, Galileo, Kepler, Newton, Herschel, and Bessel.

*Spring (3) (Not offered in 1944-45)*

### 107 Method of Least Squares and Computing Practices

Fundamental principles and processes and applications in the fields of astronomy, physics, and engineering.

*Spring (3) (Not offered in 1944-45)*

## TWO-YEAR COURSE

### L40 Elementary Astronomy

**Watson**

A survey course planned to acquaint the student with the more important facts pertaining to both the solar system and to the stars. The first part of the course is devoted to the study of the earth as an astronomical body and to the other planets. The latter part is devoted to a study of the sun and stars. *Open only to students enrolled in a two-year curriculum.*

*Spring (3)*

## BIOLOGICAL SCIENCES

*The courses offered in Biological Sciences are listed below. Anatomy, see Zoology, page 113; Physiology, page 103; and Zoology, page 113.*

## BACTERIOLOGY

### LOWER DIVISION COURSES

**1 General Bacteriology** **Harvey**

An introduction to bacteriology. Effects of physical and chemical agencies upon bacteria; biochemical activities of bacteria; microscopic examination and cultivation of bacteria; the bacteria of air, water, soil, milk and dairy products, other foods; industrial applications. Introduction to disease-producing bacteria. Required of prenursing students. Two hours of lecture and six hours of laboratory per week. Prerequisite: Chemistry 1A or 2A.

*Fall (4)*

**199 Special Problems** **Harvey**

Work other than is outlined in the regular courses. Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least fifteen units of work in the department (including courses in Bacteriology and Chemistry) with grades of A or B.

*Fall or Spring (1 or 2)*

## BIOLOGY

### LOWER DIVISION COURSES

**1 Survey of Biology** **Crouch**

A survey of life science, stressing the development of modern concepts in the fields of plant and animal science, bacteriology, genetics, and physiology. Emphasis is placed on the relationships of biology to modern life and the application of scientific analysis to every day problems. Three lectures and one hour of demonstration and discussion per week. Not open to students with credit for Biology 10A-10B, Zoology 1A-1B, or Botany 2A-2B.

*Fall (3)*

**10A-10B General Biology** **Johnson**

A year course in life science, more extensive than "Biology 1." Continues throughout the year and includes a three-hour laboratory period, and two hours of lectures per week. Designed for those who do not expect to specialize in zoology or botany; not open for credit to students who have taken Zoology 1A, Biology 1, or Botany 2A. Students who have taken 10A-10B may elect Zoology 1B or Botany 2A, 2B for credit.

*Year Course (3-3) Begins in Fall only*

**LA Mathematics of Solutions and Dosage** **Johnson**

Arithmetic review with computing of dosage, percentage of solutions, apothecaries weights and graph making. Two hours per week.

*Fall (1)*

### UPPER DIVISION COURSE

**123 Economic Biology** **Harwood**

Study of the uses of plants and animals to man and the ways in which they injure him and his possessions. Consideration is also given to general methods of control and conservation. Prerequisites: Zoology 1A, Biology 1, or Biology 10B.

*Fall (2)*

## TWO YEAR COURSE

**L40 Man and His Biological World** **Crouch**

A survey of the general field of biology with emphasis on the role of biological science in the welfare of man and his associates, consisting of three lectures and one demonstration period per week. Not open to students who have credit in high school biology, zoology, or botany. *Open only to students enrolled in a two year curriculum.*

*Spring (3)*

## BOTANY

*Lower division preparation for advanced work in botany: Botany 2A, 2B, 4, and Chemistry 1A, 1B, 8. Recommended: German, French, and elementary courses in other biological sciences.*

### LOWER DIVISION COURSES

**2A General Botany** **Harvey**

Fundamentals of structure and general behavior of seed plants. Two lectures or recitations and six hours of laboratory per week.

*Fall (4)*

**2B General Botany** **Harvey**

A continuation of 2A treating morphology and relationship of the lower plants and including an introduction to classification of seed plants. Lectures and laboratory as in 2A.

*Spring (4)*

**4 California Plants** **Harvey**

Classification and ecology of representative orders of wild flowers, trees, and chaparral of the San Diego region, including practice in the use of keys. One lecture and three hours laboratory per week. Occasional Saturday field trips.

*Spring (2)*

**5 Cultivated Trees and Shrubs** **Harvey**

Recognition of the common cultivated trees and shrubs of the San Diego region. Trips to local parks and private gardens. Three hours per week laboratory or field work.

*Fall (1) (Not offered in 1944-45)*

### UPPER DIVISION COURSES

**102 Plant Geography** **Harvey**

Lectures and field work on the principles of geographical distribution of plants. Prerequisite: Botany 2A-2B, or 4, or equivalent.

*Fall (2) (Offered in 1945-46 and alternate years)*

**104 Plant Taxonomy** **Harvey**

Identification, classification and distribution of representative orders of flowering plants. One hour of lecture and six hours per week of laboratory and field work. Prerequisites: Botany 2A-2B, or 4.

*Spring (3) (Offered in 1945-46 and alternate years)*

**199 Special Problems** **The Staff**

Work other than is outlined in the above courses. Admission by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open only to students who have completed at least fifteen units of Botany with a grade of A or B.

*Fall and Spring (1 or 2)*

## CHEMISTRY

*Lower division preparation for the liberal arts major in chemistry: Chemistry 1A-1B with an average grade of C or better, Chemistry 7-8, Physics 2A-2B and 3A-3B or their equivalent, Mathematics 3A-3B or the equivalent, and a reading knowledge of German. Students planning to do graduate work in chemistry or to transfer to certain other colleges and there work for a degree with a major in chemistry, are advised to take Physics 1A-1B-1C-1D and Mathematics 3A-3B-4A-4B in place of the courses listed above.*

*Liberal arts major (upper division): A minimum of twenty-four upper division units in chemistry including Chemistry 105A-105B, 110A-110B and111A-111B. The choice of related minors and the organization of the course of the major student must follow a definite plan approved by the department.*

*For requirements for liberal arts major in physical science, see page 100.*

LOWER DIVISION COURSES

**1A-1B General Chemistry** **Messner**

The general principles and laws of chemistry, and a description of the elements and their compounds. Two lectures, one quiz and two laboratory periods per week. The laboratory work in the second semester consists of work in qualitative analysis. Prerequisites: At least two years of high school mathematics. Recommended: High school chemistry and physics.

*Year course (5-5)*

**2A-2B General Chemistry** **Ross**

A general course for those not intending to take advanced courses in chemistry. The work in the first semester stresses inorganic chemistry and fundamental principles; that of the second semester covers an introduction to organic and biochemistry. Emphasis placed on applications of chemistry to everyday life. Two lectures and one laboratory period per week. Required of prenursing students and recommended for those desiring chemistry as part of a liberal education.

*Year course (3-3)*

**7-8 Organic Chemistry** **Ross**

A general consideration of the carbon compounds (both aliphatic and aromatic) and their derivatives; their synthesis, constitution, and properties, and the principles involved. Two lectures and one laboratory period per week first semester; one lecture and two laboratory periods per week second semester. Prerequisite: Chemistry 1A-1B.

*Year course (3-3)*

UPPER DIVISION COURSES

**105A Quantitative Analysis** **Messner**

The principles of gravimetric and volumetric analysis. Discussions of the theory of quantitative analysis and practice in the standardization of reagents and analysis of samples. One lecture and two laboratory periods per week. Prerequisite: Chemistry 1A-1B.

*Fall (3)*

**105B Advanced Quantitative Analysis** **Messner**

Advanced work in the theory and practice of volumetric, gravimetric and electroanalysis. One lecture and two laboratory periods per week. Prerequisite: Chemistry 105A.

*Spring (3) (Not offered in 1944-45)*

**110A-110B Physical Chemistry**

Lectures and problems on theoretical principles of chemistry. Prerequisites: Physics 1A-1B or 2A-2B, a knowledge of calculus and Chemistry 105A which may be taken concurrently. With the approval of the instructor, advanced courses in physics may be substituted for Chemistry 105A.

*Year course (3-3) (Not offered in 1944-45)*

**111A-111B Physical Chemistry—Laboratory**

Physico-chemical problems and measurements. Two laboratory periods per week. Prerequisites: Credit or registration in Chemistry 110A-110B.

*Year course (2-2) (Not offered in 1944-45)*

**112A-112B Industrial Analysis**

A laboratory course including the analysis of fuels, petroleum products, water, and gas. Prerequisite: Chemistry 105A which may be taken concurrently.

*(3-3) (Not offered in 1944-45)*

**114 Biochemistry** **Messner**

An introductory lecture course covering the carbohydrates, proteins, fats and the changes which they undergo in digestion and metabolism as well as a consideration of the vitamins and other accessory food factors and their importance to the body. A brief discussion of the chemistry of plant life. Prerequisites: Credit or registration in Chemistry 7, 8.

*Spring (3) (Offered in 1944-45 and alternate years)*

### 18 Colloid Chemistry

**Messner**

lecture course covering the theoretical principles of colloid chemistry and the prepa-ation, properties and practical applications of colloids. Prerequisite: Chemistry 7-8.

*all (2) (Not offered in 1944-45)*

### 23-124 Organic Preparations

laboratory course illustrating some of the more important synthetic methods of rganic chemistry. Laboratory and conferences. Prerequisite: Chemistry 7-8. A eading knowledge of German recommended.

*eginning either Fall or Spring (1 to 5—1 to 5) (Not offered in 1944-45)*

### 25 History of Chemistry

evelopment of the science of chemistry from the time of the alchemists to the present. onducted on the reading, report, and seminar basis. Prerequisite: Chemistry 7, 8.

*all (2) (Not offered in 1944-45)*

### 27 Advanced Inorganic Chemistry

**Ross**

detailed study of the Periodic Table. Discussion of complex inorganic compounds nd oxidation-reduction potentials. Prerequisite: Chemistry 1A-1B and upper division tanding.

*all (2) (Offered in 1944-45 and alternate years)*

### 44 Industrial Chemistry

ndustrial stoichiometry, flow sheets, flow of fluids and unit processes. Lectures, prob-ems, and reports. Prerequisites: Chemistry 1A-1B, Physics 1A-1B or 2A-2B.

*pring (3) (Not offered in 1944-45)*

### 99 Special Problems

**Instructors of the Department**

upervised individual work in specialized branches of chemistry. Admission only by he consent of the instructor. Hours and credit to be arranged in each case. Only pen to upper division students who have shown their ability to do A or B work in hemistry.

*Fall and Spring (1-3) (Not offered in 1944-45)*

## COMMERCE

(See Economics and Commerce, below)

## ECONOMICS AND COMMERCE

**The department provides an opportunity for the student to choose between a major in economics and a major in commerce in satisfying the requirements for the Bachelor of Arts degree.**

**Economics.** *Lower division preparation for the liberal arts major in economics and for the junior certificate: Economics 1A-1B, 14A-14B and at least one of the following: Political Science 1A-1B or 71A-71B; History 4A-4B, 8A-8B; Psychology 1A-1B; Sociology 50A-50B; Anthropology 1A-1B. Recommended: Economics 18A-18B, Geography 10A-10B.*

*Liberal arts major in economics, 24 upper division units required as follows: Economics 100A, 140, and 100B or 111, with 9 or more additional units selected from Economics 100B, 107, 111, 125, 131, 133, 135, 150, 171, and 195. Electives: Six or more additional upper division units in economics. Political Science 143A-143B may be substituted for elective units in economics.*

**Commerce.** *Candidates for a teaching credential in business education should refer to the statement "Admission to Teacher Education Curricula" on page 21 and to the curriculum for the A.B. degree with a special credential in Business Education on pages 30 to 31.*

*Lower division preparation for the liberal arts major in commerce and for the juni certificate: Economics 1A-1B, 14A-14B, 18A-18B; English 1B, 2; Geography 10 10B, Mathematics C, or equivalent, and Economics 2; History 4A-4B or 8A-8B Political Science 1A-1B or 71A-71B.*

*Liberal arts major in commerce, 24 upper division units required as follows: Economi 111, 121, 140, with 12 or more units additional chosen in one of the following group*
*A. Accounting: Economics 160A-160B, 161, 162.*

*B. Banking and Finance Economics 133, 135 and 6 units selected from Economics 10 131, 134, 137.*

*C. Business Administration: 6 units selected from Economics 123, 125, 137, 142, 15*
*Electives: 9 or more additional upper division units in economics.*

## LOWER DIVISION COURSES

**1A-1B Principles of Economics** **Camero**

The basic principles of economics: utility, wealth, value, price; economic productio distribution, and consumption; rent, interest, wages, and profit; competition, monopoly, and large scale production; property, economic waste, and luxury; money an banking, international trade and tariffs; transportation corporations, labor problems socialism, taxation, etc. Aims of the course: (1) to provide a foundation for furthe intensive study of economic problems; (2) to furnish to those who expect to follow business pursuits a broad foundation in economic principles; and (3) to introduc future citizens to political and economic problems of our time. Lectures, discussions quizzes, and collateral reading. Not open to entering freshmen except by specia arrangement.

*Year course (3-3)*

**2 Mathematics of Finance** **Wrigh**

Interest and annuities; amortization; sinking funds; valuation of bonds; depreciation mathematics of building and loan associations; mathematics of life insurance. Prerequisites: Two years of algebra in high school, or equivalents.

*Spring (3)*

**14A-14B Accounting** **Wrigh**

A knowledge of bookkeeping not required and not advantageous. The balance sheet; profit and loss statement; various types of books of original entry; the opening, conducting, and closing of books for different kinds of businesses; organizations, reorganizations, dissolutions, and consolidations, etc., keeping in view the best modern accounting practice. Five hours lecture and laboratory.

*Year course (3-3)*

**18A-18B Commercial Law**

The leading and fundamental principles of business law. Simple cases showing the actual application of the principles to commercial and business transactions, rather than the development of those principles. The subjects covered: contracts, sales, agency, partnerships, corporations, real property, negotiable instruments, insurance, and wills, with a brief study of evidence.

*Year course (3-3)*

## UPPER DIVISION COURSES

**100A Modern Economic Thought** **Cameron**

Review of schools of economic thought in the light of recent economic theory with special reference to value and distribution. Special attention is given to the marginal utility theory of value, to the contributions of the institutional economists, and to the work of statisticians in the development of economic theory. Prerequisite: Economics 1A-1B.

*Fall (3)*

**100B Modern Economic Thought**

A problem course. Subjects include price theory; distribution with particular emphasis on income; effects of various kinds and degrees of competition and regulation; war economy and government planning. Recommended: Economics 100A.

*Spring (3) (Not offered in 1944-45)*

**103 The Economics of War and Post-War Recovery and Reconstruction** **A. G. Peterson**

I, Backgrounds of the Present War; II, The Requirements of War Economy; III, International Recovery and Reconstruction; IV, National Recovery and Reconstruction.

*Spring (3)*

**107 Credit and Credit Institutions**

A study of the economics of credit, its cost, and the agencies supplying credit. Special attention is given to the growth of government credit agencies and their place in modern economic society. Prerequisite: Economics 1A-1B. Recommended: Economics 100.

*Spring (3) (Not offered in 1944-45)*

**111 Economic History of the United States** **Wright**

A comprehensive survey of American economic development and of national legislation in the field of industry.

*Spring (3)*

**121 Business Administration** **A. G. Peterson**

Problems of business administration as an interrelated whole and as an indication of lines of study which may lead to the solution of those problems. A discussion of the problems of the business administrator with particular reference to the character of the problems involved and to the control policies and devices of the manager. Questions, problems, and case studies. Prerequisite: Economics 1A-1B.

*Fall (3)*

**123 Principles of Marketing**

A survey of the fundamental principles and methods of marketing. Intended as a basic training for students interested in the economics of advertising, sales management, retailing, and foreign trade, as well as for those wishing a knowledge of the existing market structure. Subjects covered include price policies, distribution methods, finance, risk, market information, and governmental regulation. Prerequisite: Economics 1A-1B.

*Spring (3) (Offered 1945-46 and alternate years)*

**125 General Insurance—Principles and Practice**

Economic theory of risk, its extent and importance to both the individual and business; transfer of risk; distribution and prevention of loss; types of insurance carriers; problems of rate making; the insurance contract; coverages; special forms of life, fire, marine and casualty insurance; state supervision.

*Fall (3) (Not offered in 1944-45)*

**127 Life Insurance—Principles and Practice**

A study of social and individual values involved in the institution of life insurance. The student is then directed to the types of life insurance companies and associations, home office and agency organization, types of contracts, surrender value, policy loans and extended insurance, surplus and dividend policies, reserves, group, industrial and social insurance, and state supervision.

*Fall (3) (Not offered in 1944-45)*

**128 Land Economics**

Real estate in all its aspects: property rights, transfer of title, valuation, finance, selling, property management, taxation, insurance, city planning, and the like, with special emphasis upon problems as they exist in San Diego.

*Spring (3) (Not offered in 1944-45)*

**131 Public Finance and Taxation** **A. G. Peterso**

Principles and practice of taxation, public expenditures, and financial administratio Economic effects of public expenditure, indebtedness, and taxation. Prerequisite Economics 1A-1B.

*Spring (3) (Not offered in 1944-45)*

**133 Corporation Finance** **Camero**

The corporate form of organization, instruments of long-time finance, methods o raising capital, efficient financial management, the financing of reorganizations, an governmental control. Prerequisite: Economics 1A-1B.

*Fall (3)*

**134 Investments** **Camero**

Investment principles and practices with emphasis upon problems of the small inves tor, such as tests of a good investment, sources of information, types of stocks an bonds, mechanics of purchase and sale, investment trusts, real estate mortgages, an the like.

*Spring (3)*

**135 Money and Banking** **Camero**

The elements of monetary theory. History and principles of banking with specia reference to the banking system of the United States. Prerequisite: Economics 1A-1B

*Spring (3)*

**137 Credits and Collections** **Camero**

The credit man and his work, including the instruments with which he works, source of credit information, the technique of his department, collection methods, legislatio for the protection of debtor and creditor, and credit insurance.

*Fall (3) (Not offered in 1944-45)*

**140 Statistical Methods**

The nature and uses of statistical method in the social sciences. Practice in tabula and graphic presentation of data; analysis of frequency and time series; index numbe construction and study of correlation techniques. Prerequisite: Mathematics A an D, or equivalent.

*Fall (3)*

**142 Business Fluctuations and Business Forecasting**

Fundamental factors in business cycles are analyzed and cycle theories are examined. Study of current business conditions begins early in the course and develops into practical application of forecasting methods to both business and other data. Prerequisite: Economics 140.

*Spring (3) (Not offered in 1944-45)*

**150 Labor Problems and Industrial Relations** **A. G. Peterson**

A discussion of employment, hours, wages, working conditions, insurance, pensions, workmen's compensation, labor organizations and labor legislation. Organization of personnel functions; selective devices, training and safety programs, compensation plans, morale.

*Spring (4) (Offered in 1945-46 and alternate years)*

**160A-160B Advanced Accounting** **Wright**

An intensive study of the corporation, its accounting and financial problems; a thorough study of the balance sheet; depreciation; factory accounting, etc. Under practical accounting an endeavor is made to design, construct, and operate sets of books to meet the needs of different conditions and kinds of businesses. Six hours lecture and laboratory. Prerequisite: Economics 14A-14B.

*Year course (3-3) (Offered in 1944-45 and alternate years)*

**61 Cost Accounting** **Wright**

rinciples and methods of cost accounting in the mercantile establishment and in the ctory. A study of bookkeeping procedure, the forms used, and their application to ractical problems. Prerequisite: Economics 14A-14B.

*all (3) (Offered in 1945-46 and alternate years)*

**62 Accounting Systems** **Wright**

he accounting systems used in various types of business and financial concerns. Some ractice in devising and installing systems. Prerequisite: Economics 14A-14B.

*pring (3) (Offered in 1945-46 and alternate years)*

**64 Income Tax Procedure** **Wright**

consideration of the problems arising from the Federal income tax. The problems re approached from the point of view of the taxpayer who desires to determine the xact application of the law to the interests he represents as well as from the accountg point of view. No knowledge of accounting procedure is necessary.

*all (3) (Not offered in 1944-45)*

**65A-165B Auditing** **Wright**

he fundamental principles of accepted procedures of auditing and related types of ccounting engagements.

*ear course (3-3) (Not offered in 1944-45)*

**66 Honors Course** **The Staff**

ee page 15.

*all (3) or Spring (3)*

**67 Governmental Accounting** **Wright**

comparative study of accounting systems used by municipalities, counties, and the tate of California; detailed comparisons with commercial practice; procedures in andling budget accounts, appropriations, and encumbrances; subsidiary records; cost ecords; internal checks; auditing.

*pring (3) (Not offered in 1944-45)*

**71 Transportation** **Cameron**

he development of railway transportation; railroad financing; rates and rate making; overnmental regulation; government operation of railroads during the war; recent evelopment of motor and air transportation; current problems in public utilities. rerequisite: Economics 1A-1B.

*all (3) (Offered on demand)*

**95 International Economic Relations** **A. G. Peterson**

brief treatment of certain geographical, sociological, and legal phases of international elations followed by a study of the commercial and industrial basis of world economy ouching upon a number of special problems involved. An introductory study of mateials covering the processes, principles, and policies of international trade. The course oncerns itself primarily with the economic basis of international relations, but politial aspects are almost constantly taken into account in recognition of the fact that nternational relations are frequently political in form but economic in content.

*Offered in the summer session)*

**98 Investigation and Report** **A. G. Peterson**

esigned to stimulate independent study and investigation; to furnish guidance in the ollection, organization, and presentation of factual material; to improve the technique f term reports.

*all and Spring (1-3)*

## TWO-YEAR COURSES

**L15A-L15B Elementary Accounting** **Watenpaugh**

n introductory course in the fundamental principles of accounting; recording busiess transactions; opening and closing books of different kinds of business in accordnce with modern accounting practice; accounting theory combined with actual prac-

tice. Balance sheet; profit and loss statements; accounts; book of entry, etc. Planned for students entering accounting work who must confine their preparation to one or two years. Open only to students enrolled in a two-year curriculum.
*Year course (3-3)*

**L16A-L16B Secretarial Accounting** **Watenpaugh**
A course in secretarial accounting covering the fundamental principles of accounting and the application of these principles to the accounting work required by one employed in a secretarial capacity. Open only to students enrolled in a two-year curriculum.
*Year course (3-3)*

**L45A-L45B Business Economics** **Cameron**
A basic course in the general principles of business economics and the application of these principles to current problems of man's economic life. A coordinated description of economic conditions, circumstances and forces which are of general significance throughout the business world. The development of theory as an interpretation of and guide to practice. Emphasis placed on actual business and financial operations and matters of everyday business experience which may serve as guides for individual conduct and the development of social policy. Human wants and their satisfaction; organization and purpose of business; risks and insurance; how prices are determined; money, credit and banking; taxation; principles of consumption; government and business; wealth, value, capital, rent, interest profits; etc. Not open to freshmen. Open only to students enrolled in a two-year curriculum.
*Year course (3-3)*

**L65A-L65B Record Keeping** **Watenpaugh**
An advanced course in the application of accounting theory and principles to accounting practice; the technical arrangement of accounting forms, records and reports found in business; advanced theory. Opportunity afforded students through the use of practice sets, etc. to secure practice in applying principles to actual work done in business. Prerequisite: Accounting 15A-15B or 16A-16B or Economics 14A-14B. Open only to students enrolled in a two-year curriculum.
*Year course (3-3)*

## COMPARATIVE LITERATURE

Requirements for the minor in Comparative and General Literature: (1) a minimum of twelve units of work must be completed in courses offered by the department, at least six of which must be in upper division courses; (2) the work to be taken should be arranged in consultation with an instructor selected by the department.

### LOWER DIVISION COURSES

**52A-52B Types of World Literature** **Adams**
For a description of this course, see English 52A-52B.
*Year course (3-3)*

### UPPER DIVISION COURSES

**101A Modern Continental Fiction** **Dickhaut**
For description, see English 101A.
*Spring (3) (Offered in 1944-45 and alternate years)*

**104 Latin-American Literature in English** **Phillips**
A study of the principal writers of the Latin-American countries, with lectures in English and reading in English transactions. Class reports on collateral reading. Spanish credit will be given to those who wish to do the requisite reading in Spanish.
*Spring (3) (Offered in 1943-44 and alternate years)*

**115 The Bible as Literature** **Kennedy**
For description, see English 115.
*Fall (3) (Not offered in 1944-45)*

**0 Masterpieces of French Literature** **E. M. Brown**

cultural course designed to be given in introduction to the great French works from e Song of Roland through Cyrano de Bergerac, with emphasis on the 16th, 17th, th and 19th century authors. The contributions to world thinking of Rabelais, ontaigne, Moliere, Racine, Descartes, Pascal, Montesquieu, Voltaire, Rousseau, ugo, Balzac, Flaubert, Maupassant, Zola, will be studied through lectures and outside adings.

*ll (3) (Offered in 1945-46 and alternate years)*

**2 German Literature in English** **Walker**

asterpieces of German literature from the 18th and early 19th centuries. English anslations read. No knowledge of German required.

*ring (3) (Offered in 1944-45 and alternate years)*

**4 Spanish Literature in English**

study of the principal Spanish writers, emphasizing the 17th and 19th centuries d stressing the relationships between Spanish and other European literature. l lectures, collateral reading and reports in English.

*all (3) (Not offered in 1944-45)*

**2A Survey of Drama: Comedy**

or description, see English 152A.

*all (3) (Not offered in 1944-45)*

**2B Survey of Drama: Tragedy**

or description, see English 152B.

*pring (3) (Not offered in 1944-45 and alternate years)*

**7 Primitive Myths and Rituals** **Rogers**

or description, see Anthropology 157.

*pring (3) (Offered in 1945-46 and alternate years)*

## EDUCATION

### UPPER DIVISION COURSES

**100A Methods and Materials of Instruction** **Deputy**

course required of all candidates for the junior high and all special secondary edentials. It deals with general methods of instruction and the organization and nctions of the secondary school curriculum. Candidates for a combination of ther a junior high or a special secondary with an elementary credential may substitute the work of the elementary practicums for this course, but not vice versa. rerequisite: junior standing.

*all and Spring (3)*

**100B Methods and Materials of Instruction** **Tinsley and major subject instructors**

he course deals with specific methods and materials in the field of the teaching ajor or minor.

| ubject sections in L100B are as follows: | Semester offered |
|---|---|
| Ed. L100B-A, Methods in Art | Both |
| Ed. L100B-B, Methods in Bookkeeping | Fall |
| Ed. L100B-BE, Methods in Bus. Educ. | Spring |
| Ed. L100B-E, Methods in English | Spring |
| Ed. L100B-L, Romance Language Methods | Spring 1946 |
| Ed. L100B-MA, Mathematics | Fall |
| Ed. L100B-ME, Methods in Merchandising | Spring |
| Ed. L100B-MU, Methods in Music | Fall, 1945 |
| Ed. L100B-PE, Methods in Phys. Ed. (Men) | Both |
| Ed. L100B-PE, Methods in Phys. Ed. (Women) | Both |
| Ed. L100B-SC, Methods in Science | Spring |
| Ed. L100B-SA, Methods in Speech Arts | Fall |
| Ed. L100B-ST, Methods in Stenography | Fall |
| Ed. L100B-S.SC, Methods in Social Sci. | Both |
| Ed. L100B-T, Methods in Typing | Spring |

One unit of this course is to be taken with the college supervisor of directed teachi in the secondary schools and must be taken in conjunction with the first assignment directed teaching; two units are taken with an instructor in the major subject fie

*Fall and/or Spring, as indicated (3)*

**102A Measurement in Education** **Deputy, Tinsl**

A course required of all students preparing for a teaching credential. It deals wi the use of tests in the diagnosis and improvement of learning; construction of obj tive examinations; problems of evaluation in education; and the elements of stat tical techniques.

*Fall and Spring (3)*

**102B Child Growth and Development** **Depu**

The course deals with a study of the mental, emotional, social, and physical develo ment during childhood and adolescence.

Directed observation required. Students who have credit in Psychology 102A 102B will receive only half credit for this course.

*Fall and Spring (3)*

**LE109B Educational Administration and Supervision Field Work**

Individual field work as required for the administration credential. By arrangeme with the Dean of Education. *(3)*

**LS110 Educational Organization and Supervision**

Types of supervision and methods of evaluating and improving teaching. Prerequ sites: Graduation from college with a teaching credential or two or more years teaching experience.

*Summer (3)*

**LS111 English in the Junior High School** *(See Education 100B)*

Objectives of literature and language teaching in the junior high school; criteria f selection of material; technique of classroom procedure; observation in the ci schools. Prerequisite: The satisfaction of the lower division requirements in Engli for the teaching major in English.

*Summer (3)*

**LS114 Social Science in the Junior High School** *(See Education 100B)*

The teaching of some of the elementary facts and principles of a "general" soci science suited to the experience and development of the junior high school pup through the medium of such social studies in the junior high school curriculum history, geography, and civics. Methods of developing a genuine and continui interest in social and civic problems through observation and reading, discussed ar illustrated. Special stress on evaluating historical and geographical material f educative purposes on this level. Prerequisites: Six units of geography and six uni of history.

*Summer (3)*

**Education 115A History and Philosophy of Education** **Au**

Historical backgrounds and underlying philosophies upon which the modern publ school system has been established. Required of all candidates for the general el mentary and general junior high school credentials. Recommended for all oth credential candidates. Prerequisite: senior standing or the equivalent.

*Fall and Spring (3)*

**Education 115B Secondary Education** **Tinsle**

Prevailing types of secondary education; curricular organization; trends in organ zation and development; teacher and pupil personnel; underlying aims and pri ciples. Required of all candidates for the general junior high and special secondar school credentials. Prerequisite: senior standing or the equivalent.

*Fall and Spring (3)*

**L116 Directed Teaching** **Ault, Deputy, Madden, Tinsley**

Systematic observation, participation and teaching under supervision in the campus elementary school, the affiliated city elementary school, the Woodrow Wilson Junior High School, and the Herbert Hoover Senior High School. All students enrolled in directed teaching in the secondary schools are automatically enrolled in Education 100B which meets throughout the semester as announced in the time schedule.

The general plan is for elementary school credential candidates to take, in addition to the education practicums, a half-day of teaching daily in the campus elementary school or two and one-half hours daily in one of the affiliated city elementary schools throughout one semester. Junior high school and special secondary school credential candidates will be guided by their adviser relative to the distribution of their directed teaching. For those seeking a combination of credentials, the requirements for each teaching level must be satisfied. Further information regarding this requirement should be requested of the Dean of Education when the student first registers for directed teaching.

Thirty clock hours of directed teaching will usually carry one unit of credit in the course, but the final amount of credit allowed will depend upon the character and quality of the teaching done by the student. Directed teaching requirements may be reduced for those who furnish evidence of successful public school experience.

The maximum amount of credit allowed for this course is twelve units.

The universities usually reduce the amount of directed teaching credit they will allow to four units. Students planning to transfer to such institutions should be prepared to meet this reduction with an equal number of acceptable units in other courses. No grade below a *C* is acceptable for credit in this course.

Prerequisites: Completion of 75 units of college work; admission to teacher education; a *C* average in all college work and in the work of the preceding semester; three units of work in psychology; a minimum of one semester's work in this college. No credit will be given unless the student registers for this course in the office of the Dean of Education.

**L117A Music in the Elementary School** **Hunt**

Main objectives of music teaching in the public elementary schools. Study of the child voice. Organization of song material by grades. Procedure in presenting rote songs, ear training, elementary notation, music reading, and part singing. Conducting. Not open to students taking the elementary credential, nor to freshmen. Prerequisite: Music 1A, or the equivalent.

*Fall and Spring (2)*

**L117B Methods in Instrumental Music** **Hunt**

A study of the theory of problems or organizing and conducting school bands and orchestras, and the selection of materials. Provides practical experience in conducting a children's orchestra and teaching sectional groups. A study of systematic planning of courses of study for pupils of various ages and abilities will be made.

*Fall and Spring (2)*

**L119 Art in the Elementary School** **Patterson**

Discussion of the elements and principles of art and their place in the art expression and appreciation of the elementary school child. Lectures illustrated with examples of children's work and opportunity given for experience with mediums used in elementary school problems. Not open to students taking the elementary credential. Prerequisite: Art 6A.

*Fall and Spring (2)*

**L127 Secondary Music Education** *(See Education 100B)* **L. D. Smith**

Main objectives of music teaching in the public secondary schools. Organization of the chorus and glee clubs, voice testing, seating, a survey of song materials available. Organization of courses in applied music, harmony, history and appreciation.

*Fall (2) (Offered in 1945-46 and alternate years)*

### LS130 Educational Psychology

Man's equipment for learning and the learning process. Consideration given to huma behavior which is fundamental to learning. The study of learning includes such topic as laws of learning, improvements in learning, remembering and forgetting, fatigue i learning, and the transfer of training. Prerequisite: Psychology 1A.

*Summer (3)*

### L145 Organization and Administration of Music Education **L. D. Smit**

Theory of the general principles of music administration; correlation of music with th various subjects in the public schools; music tests; creative work.

*Fall (2) (Offered in 1944-45 and alternate years)*

### L147A Education Practicum (Kindergarten-Primary)

**I. Hammack, Hunt, Madden, Patterso**

The course is a continuation of L147B. It is a study of kindergarten education an must be accompanied by directed teaching in the kindergarten. The course include elementary art education (1), elementary music education (1), children's literatur (2), kindergarten-primary education (4), and educational psychology (2). Prerequisite, L147B.

*Fall and Spring (10)*

### L147B Education Practicum

**Bacon, E. Hammack, I. Hammack, Hunt, Madden, Redi**

This course is required of all students who expect to receive a credential which will qualify them to teach in the kindergarten or in the elementary school. Students should take the course during the next semester after admission to Teacher Training, which is usually the first semester of the junior year. Registration is strictly limited to small groups.

Education Practicum is a unified course which deals with the interpretation and intelligent application of theory and practice in elementary education. The child and accumulated knowledge are studied as one affects the other. The psychology of learning is interpreted while the college student is immediately associated with the experiencing of children. For two or three hours each day classes are held in which the psychology and philosophy of education are studied and analyzed as systems of knowledge and concurrently interpreted in reference to the actual teaching participation to which the student is assigned for one hour daily. The course includes elementary art education (1), elementary music education (1), speech education (1), mental hygiene (2), elementary school reading (2), elementary education methods (3), and directed teaching (2).

The course is taught by college instructors who are in direct contact with the Campus Elementary School.

*Fall and Spring (12)*

### L148 Education Practicum

**Brydegaard, Corbett, Hunt, Madden, Patterson, Schwob, B. Stone**

The course is a continuation of Ed. L147B and is required of all students who are candidates for the general elementary credential. An extended analysis is made of the psychology of education in various fields and application is made through directed teaching in grades 4 to 7. The course includes elementary art education (1), elementary music education (1), elementary health education (2), educational psychology (2), elementary education methods (4), and directed teaching (2). Prerequisite: L147B.

*Fall and Spring (12)*

### LE170 Administration of a Visual Instruction Program

The service program of a visual instruction center is studied as a collecting, selecting, organizing and distributing center for classroom illustrative materials; a teacher training and advisory bureau in the technique and correct use of visual aids; a photographic production laboratory for making current and local illustrative materials for the curriculum; a testing division for evaluating visual equipment, standardization and upkeep of same; a center for correlating and integrating the school program with opportunities offered by other community educational institutions and organizations;

n advisory department for supervising school film productions and for instructing eachers and students in the art of photography and appreciation of photoplays.

This course is given at the visual education center of the San Diego city schools and he enrollment is limited to students who have made previous arrangements with the ead of the Education Department and with the instructor.

*Fall and Spring (2)*

**LS175A Administration and Supervision of an Elementary School**

*Summer (3)*

**LS175B City School Administration**

*Summer (2-3)*

**L176 Speech Arts in the Secondary School** *(See Education L100B)* **Jones**

Organization and conduct of junior high and high school speech activities.

*Fall (2)*

**L199 Educational Problems** **Education Staff (Dean of Education in charge)**

A course for senior students in residence and enrolled in teacher training who have shown ability to work independently on educational problems. The problem can be chosen only after consultation with a staff member. Admission by consent of the staff. Credit and hours to be arranged.

*Summer (1-3)*

## ENGINEERING

*(For curriculum in engineering see pages 42-44.)*

### LOWER DIVISION

**1A-1B Plane Surveying** **Gleason**

Use and adjustment of surveying instruments, computations and map-making, together with a study of land, topographic, city, and mine surveying. Two instruction periods and one three-hour period for field work and mapping each week. Prerequisites: Trigonometry and Mechanical Drawing, or equivalent, and sophomore standing.

*Year course (3-3)*

**S3 Summer Class in Surveying**

Practical field problems in reconnaissance, triangulation, location and topographic surveys. Observations for meridian, time and latitude. Precise work in linear and angular measurements. Development of self-reliance, accuracy, and professional skill on the part of the student. Four weeks course held in the mountains near San Diego. For details regarding location of camp, date of registration, date of opening, and other arrangements, a special announcement of the surveying camp may be secured at the Registrar's Office. Offered if demand is sufficient. Prerequisite: Surveying 1A-1B.

*Summer (3)*

**21 Descriptive Geometry** **Walling**

Fundamental principles of descriptive geometry and their application to problems of engineering. Lectures and drafting. Prerequisites: One year of mechanical drawing, and sophomore standing.

*Fall (3)*

**22 Machine Drawing** **Walling**

Design and drawing of simple machine parts with emphasis upon the production of standard drawings. Lectures and drafting. Prerequisite: Engineering 21, Mathematics 3A-3B.

*Spring (3)*

**23 Materials of Construction** **Walling**

Manufacturing processes, structural properties and adaptability of the principle materials used in engineering. Lectures; Prerequisite: Sophomore standing.

*Spring (2)*

**100A-100B Elements of Electrical Engineering** **Wallin**

Theory and characteristics of electrical equipment with emphasis on industria applications.

100A Direct current circuits, generators and motors. Introduction to alternatin current circuits.

100B Alternating current circuits, transformers, alternators, induction on synchronous motors, conversion apparatus and transmission lines.
Lectures and problems. Prerequisites: Mathematics 4A, Physics 1C or permissio of the instructor.

*Year course (3-3) (Offered in 1944-45 if demand is sufficient)*

**105 Hydraulics** **Walling**

A general course in hydraulics including the fundamental principles of hydrostatic and hydrodynamics applied to the flow of water through orifices, over weirs, through pipes and canals. Lectures and problems. Prerequisites: Mathematics 4A, Physic 1C. Recommended: Physics 105A-105B.

*Spring (3) (Not offered 1944-45)*

**123 Materials of Construction** **Walling**

Essentially the same as Engineering 23 except that students will be expected to investigate more fully some particular material or process and prepare a written report upon it. Prerequisites: Chemistry 1B, Junior standing.
*Spring (2)*

**128 Elements of Heat Power Engineering** **Walling**

Fundamental consideration of fuels, combustion, steam, boilers, furnaces, chimneys, steam engines, steam turbines and auxiliaries, internal combustion engines. Lectures and Problems. Prerequisites: Mathematics 4A, Physics 1B. .
*Fall (3) (Not offered 1944-45)*

## ENGLISH

*Lower division preparation for the liberal arts major in English: at least 12 units of work, including 1B, 56A, 56B. Upper division requirements for the liberal arts major: (1)at least 24 units in upper division English courses, including 18 units from the following: 112, 116A, 116B, 117A, 117B, 118A, 118B, 119, 121, 126, 151, 160; (2) selection arrangement of courses under the supervision of an adviser appointed by the English department; (3) a reading knowledge of one of the languages taught in the College: French, German, Italian, Latin, Spanish. (By "reading knowledge" is meant two full years of lower division work, or the equivalent. Further work in one of these languages, in upper division courses, is highly recommended.)*

### LOWER DIVISION COURSES

**L1A Subject A: English Composition** **The Staff**

The elements of composition, including drill in grammar and usage; exercises in vocabulary building and careful reading; theme writing. Credit in this course is equivalent to passing the English A Examination, and admits to English 2 courses.
*Fall and Spring (3)*

**L1AA Reading Efficiency and Vocabulary Extension** **Trail**

Special drill in reading for comprehension; vocabulary building; practice in elementary composition. Systematic, progressive, and intensive training and practice in effective reading and methods of study. This course may be substituted for English L1A.

*Fall and Spring (3)*

**1B-2 First-Year Reading and Composition** **The Staff**

The first half year 1B, is composition, with exposition stressed. The second half year may be chosen from any section of English 2, which is a continuation of composition, but is primarily reading and the analysis of literature and is open to students who have completed either 1B or L1A. By completing 1B and a section of 2, the student earns six units of college composition.

Students may elect more than one section of English 2.

**1B Composition** **The Staff**

Exposition is stressed. Prerequisite: satisfactory Subject A test. *Not open to students who have taken English L1A or L1AA.*

*Fall and Spring (3)*

**2A Argumentation**

A study of the underlying principles of, and of the methods involved in, writing designed to secure agreement or favorable consideration, together with much practice in both shorter and longer forms of such writing.

*Spring (3) (Not offered in 1944-45)*

**2B Biography** **F. L. Johnson**

Composition, stressing personal narrative and informal essay. Reading from field or biography and memoirs.

*Fall and Spring (3)*

**2C Periodical Literature** **Dickhaut**

Composition stressing article writing of varied types. Reading from current periodical literature.

*Fall and Spring (3)*

**2D Foundations of the Language**

An elementary course in English linguistics designed to make more significant the native language through a study of the elements which have gone into the composition of its vocabulary.

*Fall and Spring (3) (Not offered in 1944-45)*

**2E Modern Drama** **F. L. Johnson**

Composition based upon the reading of recent plays and dramatic criticism.

*Spring (3)*

**2F Short Story Writing**

A practical course in writing, including a study of short story technique and markets, and the writing of complete short stories.

*Spring (3) (Not offered in 1944-45)*

**2G Freshman Literature** **Keeney**

An introduction to literature of various types in modern European and American culture, with composition.

*Fall and Spring (3)*

**L8 English in Business** **Amsden**

Theory and practice of business correspondence. Business letters as applied salesmanship; problems in writing credit and collection letters, applications for employment, adjustment letters, and sales letters. Prerequisite: English L1A or equivalent, as indicated by Subject A Examination, or record from college. This course is planned for students in Secretarial Training; units obtained in it cannot be used to meet English requirements in other fields.

*Fall and Spring (3)*

**10 Recreational Reading** **The Staff**

Development of personal tastes for leisure-time reading through lectures and oral or written reports. May be taken a second time with new material.

*Fall and Spring (1)*

**50A-50B Survey of American Literature** **Kennedy**

Semester I: A survey of American literature from its beginnings to 1860. Semester II: American literature from 1860 to the present. Lectures, discussions, and reports.

*Year Course (3-3)*

**52A-52B Types of World Literature** **Adams**

A chronological survey from Homer to modern times. The first semester stresses the classical epic and tragedy. The second semester, beginning with the Renaissance, stresses prose fiction, the drama, and the essay.

*Year course (3-3)*

**56A-56B Survey of English Literature** **Keeney**

The study of some important works of English literature from the Anglo-Saxon period through the Victorian age, with emphasis upon the literary history of each period.

*Year course (3-3)*

### UPPER DIVISION COURSES

**101A Modern Continental Fiction** **Dickhaut**

A survey of leading French, Russian, Scandinavian, Italian, and German novelists and short story writers, from Tolstoy and his associates to the present day.

*Spring (3) (Offered in 1944-45 and alternate years)*

**101B Modern British Fiction** **Dickhaut**

The novel and short story, especially of the last quarter of a century.

*Spring (3) (Offered in 1945-46 and alternate years)*

**104 Latin-American Literature in English** **Phillips**

A survey of the literature of the Latin-American countries, with lectures in English and reading in English translations. Class reports on collateral reading. Spanish credit will be given to those who wish to do the requisite reading in Spanish.

*Spring (3) (Offered in 1945-46 and alternate years)*

**106A, 106B Advanced Composition** **Dickhaut**

A laboratory course in modern prose writing. Semester I: Artistic narrative, with description. The short story. Semester II: The essay, the magazine article, criticism. Outside readings. Prerequisite: One year of college composition. Either semester may be taken first.

*Fall, Spring (3-3) (Offered in 1945-46 and alternate years)*

**107A, 107B Advanced Composition** **Adams**

These courses are designed for students who wish to do independent work in composition. The discussions will consider the problems of effective expression as exhibited in the work of the members of the class. Prerequisite: Same as for 106A, 106B. Either semester may be taken first.

*Fall, Spring (3-3) (Offered in 1944-45 and alternate years)*

**110 Recreational Reading** **Dickhaut**

An advanced course in the group reading of modern drama, poetry and fiction.

*Fall and Spring (1 or 2)*

**112 The English Language**

An inductive historical approach to basic aspects of the language. The course includes an analysis of English sounds, grammar, and syntax, beginning with Modern English and going back through Early Modern, Middle, and Old English.

*Fall (3) (Not offered in 1944-45)*

**113 American English**

The rise of American English; its peculiarities in pronunciation, grammar, and vocabulary; slang, regional and cultural differences.

*Spring (3) (Offered in 1945-46 and alternate years)*

**115 The English Bible as Literature** **Kennedy**

A study of the narrative, poetry, and prophecy of the King James version of the Bible. Readings, reports, lectures, and discussions.

*Fall (3) (Not offered in 1944-45)*

**116A The Age of Elizabeth**

Poetry and prose, exclusive of the drama.

*Spring (3) (Not offered in 1944-45)*

**116B The Elizabethan Drama** **F. L. Johnson**

Principal contemporaries of Shakespeare.

*Spring (3) (Offered in 1945-46 and alternate years)*

**117A-117B Shakespeare** **F. L. Johnson**

A chronological survey. The first semester gives special emphasis to the histories and comedies; the second, to tragedy and the dramatic romances.

*Year course (3-3)*

**118A The Age of Swift and Pope** **Keeney**

A study of the literature of the first half of the eighteenth century, with special emphasis on social satire of Swift, Pope, Addison, Steele, Gay and Prior.

*Spring (3) (Offered in 1945-46 and alternate years)*

**118B The Age of Johnson** **Keeney**

A study of Johnson and his circle as representative of their age, together with a study of Burns, Blake, and others as forerunners of the age of Romanticism.

*Spring (3) (Offered in 1944-45 and alternate years)*

**119 The Romantic Period: Poetry** **Trail**

A study of early nineteenth century poetry; the work of Wordsworth, Coleridge, Byron, Shelley, and Keats, in relation to the thought of the revolutionary period.

*Fall (3) (Offered in 1945-46 and alternate years)*

**121 The Victorian Period: Poetry** **Trail**

A study of Tennyson and Browning and their contemporaries and successors, relating English poetry to nineteenth century life and thought.

*Fall (3) (Offered in 1944-45 and alternate years)*

**126 Nineteenth Century British Prose** **Dickhaut**

Romantic and mid-Victorian prose writers, including Coleridge, Hazlitt, Lamb, DeQuincey, Carlyle, Landor, Macaulay, Mill and Thackeray.

*Fall (3) (Offered in 1944-45 and alternate years)*

**127 Modern British Prose** **Dickhaut**

Late nineteenth and early twentieth century essays of Arnold, Galsworthy, Huxley, Newman, Pater, Ruskin, Shaw, Stevenson, Wells, and others.

*Fall (3) (Offered in 1945-46 and alternate years)*

**130A American Literature: to 1900** **Adams**

A survey of literary movements in the United States to the late nineteenth century, with a study of the chief writers. Not open to students who have credit in English 50A.

*Fall (3)*

**132 The Frontier and American Literature** **Kennedy**

A survey of the influence of the frontier upon American literature from colonial days to the present. Studies in source materials, biographies, and representative writers such as Irving, Cooper, Harte, and Mark Twain.

*Fall (3) (Offered in 1944-45 and alternate years)*

**133 American Fiction** **Adams**

The outstanding writers of novels and short stories, from Cooper to Norris.

*Spring (3) (Offered in 1944-45 and alternate years)*

**134 American Literature: 1900 to the present** **Kennedy**
A survey of American literature since 1900 with emphasis upon contemporary poetry, fiction and drama. Not open to students with credit in English 50B.
*Spring (3)*

**143 The Novel** **Kennedy**
History of the English novel from the beginnings to Hardy. Extensive reading of novels with reports. Lectures and discussions.
*Fall (3) (Offered in 1945-46 and alternate years)*

**151 Chaucer** **Keeney**
The study of Chaucer's works, and a consideration of the social and literary backgrounds of the fourteenth century.
*Fall (3)*

**152A Survey of Drama: Comedy**
Studies in the field of comedy, based on selected readings from the works of Continental, English, and American dramatists. Lectures, discussions, and reports on reading.
*Fall (3) (Not offered in 1944-45)*

**152B Survey of Drama: Tragedy**
Procedure as in 152A, with selections taken from the field of tragedy.
*Spring (3) (Not offered in 1944-45)*

**160 The Age of Milton** **Adams**
Emphasis is put upon the work of Milton.
*Spring (3) (Offered in 1945-46 and alternate years)*

**166 Honors Course** **The Staff**
Special study. Open to members of the Honors Group in English (See page 21.)
*Fall and Spring (1 to 5-1 to 5)*

**167 Research: Advanced Honors Course** **The Staff**
Special study. Open to mature, specially qualified students, graduates, teachers of English literature, and others who have demonstrated marked aptitude for intensive research in the field of English literature.
*Fall and Spring (3-5)*

**Comparative Literature.** For other courses in literature, offered by members of the English Department and other departments, see Comparative Literature, page 68.

## TWO-YEAR COURSES

**L40A Beginning Composition** **The Two-Year Staff**
The elements of composition, including drill in grammar and usage; exercises in vocabulary building and careful reading; theme writing. Open only to Two-Year students.
*Fall and Spring (3)*

**L40B Freshman English** **The Two-Year Staff**
Composition stressing exposition. Reading from essays and articles. Prerequisites: Satisfactory Subject A test. Open only to Two-Year students.
*Fall and Spring (3)*

**L40C Freshman Literature** **The Two-Year Staff**
Literature, mainly contemporary, is read for its thoughts and ideas, especially in relation to human problems and their solution. Practice in writing is continued. Prerequisite: One semester of Freshman English. Required of all Two-Year students; open only to Two-Year students.
*Fall and Spring (3)*

**.45 Sophomore English: Biography** **The Two-Year Staff**

omposition stressing personal narrative and informal essay. Reading from field of iography and memoirs. Prerequisite: English L40A or L40B, and English L40C. pen only to Two-Year students.

*all (3)*

**.46 Sophomore English Contemporary Literature** **The Two-Year Staff**

tudy of contemporary literature, with emphasis on various forms, such as the ovel, poetry, drama, etc., as used by the principal writers of the twentieth century orld. The main objective of the course is to give students a background for the ajor portion of their reading beyond college. Open only to Two-Year students.

*pring (3)*

## FOREIGN LANGUAGES

*he courses offered in foreign languages are listed below. See pages listed after each ubject for a more complete description of the offerings under that designation. French, ee below; General Language, page 80; German, page 83; Italian, page 86; Latin, age 87; and Spanish, page 109.*

*s a background for advanced work in Romance languages, students are advised to nclude in their electives as many as possible of the following courses: Geography 118, istory 121A, 121B, 147, Aesthetics 50 or 150; English 52A, 52B, 56A, 56B, 101, 18A, 119, 143.*

## FRENCH

*ower division preparation for the liberal arts major in French: French A-B-C-D; ither German A-B or Spanish A-B; History 4A-4B.*

*iberal arts major in French : Twenty-four units of upper division work, of which t least eighteen must be in French, and of which a maximum of six may be in related ubjects, arranged in consultation with the chairman of the department. At least a C verage in upper division major courses.*

### LOWER DIVISION COURSES

**A-B Elementary** **L. P. Brown, Phillips**

ntensive study of French grammar and syntax; daily written work discussed in class; lass drill in conversational idiom and pronunciation; reading with oral discussion and ésumé; dictation; introduction to contemporary prose writers. Credit not given for French A unless followed by French B. Students who have had one year of French in high school should register for two units of work in French A. Those who have had two years of French in high school should register for four units of work in French B.

*Year course (5-5)*

**C-D Intermediate Reading** **E. M. Brown, Phillips**

Reading and composition; study of standard prose as a basis for class work, collateral reading with résumés and written reports in French; dictation. Individual conferences. Prerequisite: French B or three years of high school French, or its equivalent. Students with four years of high school French should register for French D.

*Year course (3-3)*

**SC Scientific Reading** **L. P. Brown**

Reading taken from the fields of chemistry, physics, medicine, zoology, biology, etc. Outside readings of books and periodicals. Oral and written reports. Prerequisite: French B or equivalent.

*Fall (2) (Offered in 1944-45 if demand is sufficient)*

### UPPER DIVISION COURSES

**101A-101B Conversation and Composition** **E. M. Brown**

Prerequisite: French D, or its equivalent, with grade of *C*.

*Year course (3-3)*

### 105A-105B Modern French Drama E. M. Brow

Plays of Musset, Scribe, Augier, Dumas fils, Pailleron, Brieux, Hervieux, Maeterlinc Rostand, and others read and discussed as to subject matter and technique. Outsid reading and reports. Prerequisite: French D, or its equivalent, with grade of *C*.

*Year course (3-3) (Offered in 1945-46)*

### 107A-107B Eighteenth Century Literature L. P. Brow

The works of Montesquieu, Voltaire, Rousseau, the Encyclopédistes, and others. Pre requisite: French D, or its equivalent, with a grade of *C*.

*Year course (3-3)*

### 110A-11B Modern French Novel E. M. Brow

The French novel from Victor Hugo to the present day, including such authors as Hugo, Dumas, Stendhal, Balzac, Flaubert, Loti, Anatole France, Bourget, Bordeaux Bazin, Barrè, Romain Rolland, A. Gide, Marcel Proust, and others. Class and outsid reading and reports. Prerequisite: French D, or its equivalent, with grade of *C*.

*Year course (3-3) (Offered in 1947-48)*

### 111A-111B Seventeenth Century Dramatic Literature E. M. Brow

Reading in class of plays of Molière, Corneille, and Racine. Outside readings an lectures on the background of the seventeenth century in France. Prerequisite: Frenc D or its equivalent, with a grade of *C*.

*Year course (3-3) (Offered in 1946-47)*

### 199 Comprehensive Reading and Survey Course The Staf

Designed to fill up the gaps in the reading done in courses. Class meeting once a wee for guidance, reports, and quizzes. Required of all seniors majoring in French.

*Spring (3)*

## GENERAL LANGUAGE

LOWER DIVISION COURSE

### A Latin and Greek Word Derivation L. P. Brown

A general and elementary course in philology. A study of Latin and Greek roots o most frequent ocurrence in English, and of the English words derived from them.

*Fall (2)*

## GEOGRAPHY

*Lower division preparation for the liberal arts major in geography: Geography 1, 2, 3, and Geology 1A-1B. Recommended: A reading knowledge of French or German.*

*Liberal arts major (major division): Twenty-four units of upper division work in geography or 18 units in geography and six units in related subjects arranged in consultation with the chairman of the department.*

LOWER DIVISION COURSES

### 1 Introduction to Geography: Physical Elements The Staff

The nature of maps, weather and climates of the world; natural vegetation; land forms and their associated soils, with reference to their climatic relationships; the seas and their coasts. One all-day field trip. Open to all students who have not taken Geography 10A-10B. *This course is classified as a natural science.*

*Fall and Spring (3)*

### 2 Introduction to Geography: Natural and Cultural Regions The Staff

The regional differentiation of the world by human activity; areal bases of economy and nationality. Prerequisite: Geography 1.

*Fall and Spring (3)*

### 3 Elementary Meteorology Blake

An elementary study of the earth's atmosphere and changes in it which produce our weather and influence human affairs. Special attention given to local conditions, instruments, and records. Aeronautical meteorology stressed in the fall semester. *This course is classified as a natural science.*

*Fall (3)*

**Map reading and Map Interpretation** **Post**

Representation of geographic data by means of maps. Interpretation of projections, cales, symbols, land forms, and culture from topographic maps; measurements of ultural data on maps. Prerequisite: Geography 1.

*Fall (2)*

**0A-10B Economic Geography** **Post**

Beginning course in economic geography limited to students in commerce and prospecive economics majors. Not open to students who have had Geography 1 and 2. *This course may serve as prerequisite to upper division geography courses.*

*Fall and Spring (3-3) (Not offered in 1944-45)*

## UPPER DIVISION COURSES

**112 Geography of California** **Storm**

The physiographic regions of California and the cultural landscapes developed by the successive cultural groups. Prerequisite: Geography 1.

*Spring (3) (Not offered in 1944-45)*

**116 Geography of Latin America** **Post**

The natural regions of Latin America; their occupational condition and historical evolution. Prerequisite: Geography 1.

*Spring (3)*

**117 Geography of Northern and Eastern Europe** **Post**

A study of the cultural development of the countries of northern and eastern Europe n relation to physical background and historical evolution. Prerequisite: Geography 1.

*Fall (3) (Not offered in 1944-45)*

**118 Geography of the Mediterranean Area** **Post**

A study of the cultural development of the countries of Southern Europe, Western Asia, and North Africa in relation to physical background and resources. Prerequisite: Geography 1.

*Spring (3)*

**121 Geography of North America** **Storm**

The natural regions of North America, their formation and economic and historical development. Prerequisite: Geography 1.

*Fall (3)*

**124 Geography of Asia** **Storm**

The cultural regions of Asia, their physical environment, and historial development. Prerequisite: Geography 1.

*Spring (3)*

**135 Geography of the San Diego Area** **Storm**

Directed individual urban and rural field work in the San Diego area; the mapping of a small area and making its geographic interpretations. Prerequisites: Geography 1 and 2.

*Fall (3) (Not offered in 1944-45)*

**141 Economic Geography** **Storm**

A survey of the raw materials of world trade; their production and distribution as related to major geographic regions of the world. Prerequisite: Geography 1.

*Fall (3)*

**166 Honors Course** **The Staff**

To be arranged after consultation with the chairman of the department. (See page 15.)

*Fall and Spring (Credit to be arranged)*

### Two-Year Course

**L40A-L40B Introduction to Geography** **The Sta**

An introductory descriptive course designed to acquaint students with the genera features of the various regions of the world. Presents the climatic regions of th world with a description of what man has done with the resources of each. Develop a background for the interpretation of world problems and world happenings. On all-day field trip in L40A. *Open only to students enrolled in a two-year curriculum.*

*Year course (3-3)*

## GEOLOGY

*Department requirement in Geology for liberal arts major in Physical Science include in addition to Geology 1A-1B, the completion of: Chemistry 1A-1B, Mathematics 3A Physics 1A-1B-1C-1D or 2A-2B; 3A-3B. Students preparing for advanced work i Geology may substitute Engineering 21 for Mathematics 3A. Geology 2A may be sul stituted for Geology 1A in department prerequisite requirements provided the add tional necessary unit of laboratory work is completed.*

*French or German, Engineering 1A-1B and Geology 21A-21B are recommended.*

### LOWER DIVISION COURSES

**1A Physical** **Brook**

The composition, origin, and distribution of earth materials, and their modificatio through mechanical and chemical processes of change. Three lectures and one three hour laboratory period weekly with related field study during the semester. (No open to students who have had Geology 2A except for one unit upon the completion o the laboratory section.)

*Fall (4)*

**1B Historical** **Brook**

Theories of earth origin, and the evolutionary history of the earth as traced throug rock and fossil records. Consideration of the Paleontologic Sequence. Three lecture and one three-hour laboratory period weekly, with arrangement for field study an conference during the semester. Prerequisite: Geology 1A or equivalent.

*Spring (4)*

**2A General** **Brook**

Similar to Geology 1A but *without* laboratory. Open to all students except physica science majors or those already presenting credit in Geology 1A. Two lectures an one demonstration and discussion hour weekly.

*Fall (3)*

**2B Physiography** **Brook**

A study of the land forms of the United States and their physiographic history a illustrative of universal geologic conditions. Two lectures and one discussion hou weekly. Prerequisite: Geology 1A or 2A.

*Spring (3)*

**21A-21B Mineralogy** **Brooks**

Study of the common minerals and rocks. Use of the blowpipe and simple chemical reagents but with emphasis upon sight determination. Prerequisite: Geology 1A and high school chemistry, or equivalents.

*Year course (3-3) (Offered in 1944-45 and alternate years if demand is sufficient)*

### UPPER DIVISION COURSES

**100 Structural Geology** **Brooks**

The evolution and description of the structural and topographical features of the earth. Faulting, folding, and orogenic forces with practical illustrations from the North American Continent and emphasis on California geologic conditions. Lectures, discussions, and occasional field trips. Prerequisite: Geology 1A-1B.

*Fall (3) (Offered in 1944-45 and alternate years if demand is sufficient)*

**01 Geologic Problems** **Brooks**

Reconnaissance of adjacent areas with elementary mapping; or directed reading and roup discussion of California Geology; or selection and preparation of materials for he museum collections. Prerequisite: Geology 1A-1B. Registration subject to pproval of instructor.

*Fall and Spring (1-4)*

## TWO-YEAR COURSE

**40 General Geology**

An elementary course dealing with those processes of nature by which the surface f the earth is built up, deformed and torn down. A study of the natural history and ccurrence of the common rocks and minerals.

*Open only to students enrolled in a two-year curriculum.*

*Fall and Spring (3)*

## GERMAN

### LOWER DIVISION COURSES

**A-B Elementary** **H. K. Walker**

Pronunciation, reading and grammar, with practice in simple conversation, narration and description, both oral and written. Credit not given for German A unless followed by German B. Students who have had one year of German in high school should register for two units of work in German A. Those who have had two years of German in high school should register for four units of work in German B.

*Year course (5-5)*

**C-D Intermediate Review and Reading** **H. K. Walker**

Reading and composition; study of standard prose as basis for class work; collateral reading with written reports; German conversation, with the texts read as a basis; dictation. Prerequisite: German B or two years of high school German, or its equivalent. Students with credit for three years high school German, or its equivalent, should enter German C.

*Year course (3-3)*

**SC-SD Scientific Reading** **Messner**

Fall semester. Readings in scientific reader on chemistry, physics, etc.: occasional written reports on scientific subjects read outside of class; sight reading. Spring semester. Readings in special scientific or technical works; weekly written reports required; sight reading. Prerequisite: German SC-German B with a grade of *C* or two years of high school German; German SD-German SC, German C, with a grade of *C*, or three years of high school German.

*Year course (3-3) (Not offered in 1944-45)*

## HEALTH AND PHYSICAL EDUCATION

*(See Physical Education)*

## HEALTH EDUCATION

### LOWER DIVISION

**1 Health and Social Adjustment** (Men) **C. E. Peterson**

An informational course in personal and community hygiene. A study of social hygiene and the hygienic principles of living. Speakers from the County Medical Association on subjects of vital interest enrich the offerings of this course. It is especially desirable that this course be taken in the freshman year.

*Fall and Spring (2)*

**2 Health and Social Adjustment** (Women) **B. I. Stone**

An informational course, reviewing the principles underlying the improvement of personal health, and the solution of practical problems of young women and prospective homemakers. Lectures by specialists in the various fields serve to enrich the course. Required of all freshmen who are candidates for junior standing or the degree.

*Fall and Spring (2)*

### 51 Safety Education

Prevention of accidents: practical application of first aid methods leading to Americ Red Cross First Aid Certificate. Formerly listed in bulletin as Physical Educati 51.

*Fall (1) (Not offered in 1944-45)*

### 61A Nutrition **Dust**

The purpose of this course is to consider health maintenance through food selecti from the modern scientific viewpoint. Consideration is given to the fundamentals an adequate diet from the basis of the known dietary essentials and of the disord which result from the deprivation of these factors. Diets for special needs are al planned. Recommended for premedical, predental, prenursing, and sociology majo Red Cross Nutrition Certificate is granted upon course completion.

*Spring (2)*

### 61B Nutrition—Laboratory **Dust**

A basic course in food preparation which includes the study of typical food selecti and preparation methods which best conserve the essential food flavors and nutrien Class meets once a week and is open only to students who have registered in Nutriti 61A.

*Spring (1)*

### 90 Physiology of Reproduction **Hu**

A course consisting of a series of lectures and discussion dealing with normal a abnormal physiology and anatomy of reproduction, facts and frauds in sex hygie and related topics. Prerequisite: Health Education 2.

*Fall and Spring (Women) (1)*

### UPPER DIVISION

### L151 Health Education (Education 147-148) **B. I. Sto**

A course for teacher-education students which includes the study of the disease common physical defects, and health indices of school children; the detection a control of communicable diseases which may appear in the school; and the elemen which underlie a health education program. Methods of presenting personal a group health to children of different ages. Hygiene of the schoolroom, such as seatin lighting, and ventilation.

*Fall and Spring (2)*

## TWO-YEAR COURSES

### L40A Nutrition **Dusti**

A course based on the study of how to make healthful food choices from the mode scientific viewpoint. Consideration is given to the meaning and indications of ad quate nutrition and to food in its relationship to the maintenance of well-being. R Cross Nutrition Certificate is granted upon course completion. Open only to studen enrolled in a two-year curriculum.

*Fall (2)*

### L40B Nutrition-Laboratory **Dusti**

A practical course in the selection and preparation of typical foods. Emphasis placed on the conservation of essential food flavors and nutrients. Class meets on a week and is open only to students who have registered in Nutrition L40A.

*Fall (1)*

## HISTORY

*Lower division preparation for the liberal arts major in history: History 4A-4B o 8A-8B, and either Political Science 1A-1B, 71A-71B or Economics 1A-1B. Both hi tory courses are recommended for students planning to major in history. No studen shall enroll in more than one lower division history course during a semester.*

*Upper division requirements for the liberal arts major: At least twenty-four units i upper division courses in history, to be arranged in consultation with the chairman o the department. A reading knowledge of at least one foreign language is expected o history majors.*

*The history minor: from twelve to eighteen units of work in history is recommended. At least half the work should be chosen from upper division courses.*

### LOWER DIVISION COURSES

**A-4B History of Modern Europe** **Nasatir**

Development of European society and institutions from about 1500 A.D.

*Year course (3-3)*

**A-8B History of the Americas** **Nasatir**

A general survey of the history of the western hemisphere from the discovery to the present time. Emphasis on the process of planting European civilization in the new world, the international contest for the continents, the wars for independence, the development of the American republics, and their relations with each other and with the rest of the world. Based on H. E. Bolton's "Syllabus of the History of the Americas."

*Year course (3-3)*

### UPPER DIVISION COURSES

**111A-111B Ancient History**

Semester I—Social, economic, political and cultural development of the Greek states, with emphasis upon the growth of democracy, attempts at federal union and imperialism, Hellenism.

Semester II—Roman history to the beginning of the medieval period; discussions of Roman imperialism and the main constitutional, economic, social and religious developments in the republic and empire.

*Year course (3-3) (Offered in 1945-46 and alternate years)*

**121A-121B Medieval History** **Nasatir**

General survey of European political and cultural development between 500 and 1500 A.D., with special attention to intellectual tendencies and the development of institutions which culminated in the emergence of modern Europe after 1500.

*Year course (3-3) (Offered in 1944-45 and alternate years)*

**143 The French Revolution and Napoleonic Era**

An intensive study of the revolutionary period in Europe from 1789 to 1815.

*Fall (3)*

**144 Europe Since the World War**

Developments in Europe from 1919 to the present.

*Spring (3)*

**146A-146B Diplomatic History of Europe Since 1648**

A course centering around the four major European treaties, their background, drafting and results. First semester, the Treaties of Westphalia, Utrecht and Vienna. Second semester, the Treaty of Versailles.

*Year course (3-3) (Not offered in 1944-45)*

**147 History of Modern France**

Intensive survey of the political and social development of France under the Third Republic, 1870 to the present. International and colonial problems of modern France will also be considered.

*Fall (3) (Not offered in 1944-45)*

**148 History of Modern Germany**

Political, social and economic development of Germany after 1870, the Empire and Republic. German post-war problems, imperialism, and the establishment of the Third Reich will receive special attention.

*Spring (3) (Not offered in 1944-45)*

**151A-151B England Since the Norman Conquest** **Nasa**

A survey of political and constitutional development in England since 1066, stressi the transition from medieval to modern England, Tudor despotism, the struggle f self-government under the Stuarts, the rise and development of present-day politi and social institutions.

*Year course (3-3)*

**156A-156B History of British Expansion** **Nasat**

A study of the growth, development, and break-up of the older overseas empire: t beginnings of the newer empire after 1783; the rise, federation, and imperial relatio of the British Commonwealth of Nations; the crown colony system; India und British rule; and British expansion in Africa and the Pacific; development of Briti mandates.

*Year course (3-3)*

**161 South America Since Independence** **Nasat**

The republics of South America. Attention directed to the development of nationali in South America, the struggles for political stability, the exploitation of resourc diplomatic and commercial relations with the United States, and other internation problems of South America. Survey of present-day conditions, political, economi and social.

*Spring (3)*

**163 Mexico and the Caribbean Countries** **Nasat**

Same plan in general as outlined in History 161. Special attention to the relations the United States with these countries, and to the recent developments in Mexico.

*Fall (3)*

**171A-171B The Rise of the American Nation** **Leonar**

Semester I. English colonization in North America and the development of coloni institutions and politics. Semester II. The revolutionary movement and the Rev lutionary War; the establishment of the government under the Constitution to t close of the War of 1812.

*Year course (3-3) (Offered in 1944-45 and alternate years)*

**173A-173B The Expansion of the United States** **Leonar**

The rise of Jacksonian Democracy; territorial expansion and the Mexican War; t slavery controversy; the Civil War, and reconstruction; the growth and progre of the United States to the World War.

*Year course (3-3) (Offered in 1945-46 and alternate years)*

**199 Special Courses for Advanced Students** **Leonar**

Required of all students with a history major in the liberal arts curriculum and to attended during the senior year. Other students may be admitted with the permissio of the instructor.

*Spring (2)*

## ITALIAN

**A-B Elementary** **Phillip**

Intensive study of Italian grammar and syntax, with daily written work; class dri in conversational idiom and pronunciation; reading of works by contemporary writer Credit not given for Italian A unless followed by Italian B. Students who have ha one year of Italian in high school should register for Italian A. Those having tw years in high school should register for Italian B.

*Year course (5-5) (Not offered in 1944-45)*

## JOURNALISM

**Courses in journalism will not be given during the school year 1944-45. Th courses listed represent the normal program of the college, and will be taugh when the demand again becomes normal.**

*For the curriculum in journalism see page 47.*

*For the profession of journalism introductory work in the fields of literature, history political science, economics, social economics, the arts, etc., is recommended.*

*The aim in the specialized courses in Journalism is to offer introductory training in the principles and practices of journalistic writing only after a good foundation in correct speaking and writing of English has been laid. Practical training in news reporting and editing for student publications and for the daily press is emphasized.*

LOWER DIVISION COURSES

**10A-10B Contemporary Press**

Development of the American newspaper; comparison of American and foreign newspaper practices; display and treatment of news; press associations. Prerequisite to Journalism 51A-51B; open to general enrollment.

*Fall and Spring (1-1)*

**51A-51B News Gathering and Reporting**

Study of news sources and types; practice in news and feature writing; newspaper organization; excursions and special lectures. Course planned for freshmen as a prerequisite to positions on all college publications.

*Year course (3-3)*

**L53A-L53B Applied Journalism**

Practice and projects in reporting news and feature stories and in other editorial work on *The Aztec, El Palenque, Del Sudoeste.* Students not enrolled in 51A-51B are required to take L53C-L53D.

*Fall and Spring (1 to 3; 1 to 3)*

**L53C-L53D Newswriting Problems**

Techniques in meeting problems of reporters and editors on publications with emphasis upon work of class members on *The Aztec, El Palenque, Del Sudoeste.*

UPPER DIVISION COURSES

**151A-151B Newspaper Editing**

Study and practice in the editorial, headline writing and editing of newspaper copy; management of publications. Projects in newspaper and magazine work. Required of all upper division students who take L153A-L153B for credit.

*Fall and Spring (1-1)*

**L153A-L153B Advanced Journalism Practice**

Editing of student publications and direction of personnel in editorial projects. Prerequisite: 51A-51B (may be waived by instructor). 151A-151B must be taken concurrently with this course.

*Fall and Spring (1 to 3; 1 to 3)*

NOTE.—Not more than six units in all will be given for Journalism practice on student publications.

**153C-153D Newspaper Practices**

Work on community publications, including county newspapers, under direction of the instructor.

*Fall and Spring (2)*

**199 Special Course for Advanced Students**

Open to seniors with sufficient journalistic background to satisfy the instructor.

*Spring (2)*

## LATIN

**L. P. Brown**

**C-D Intermediate**

Readings from Latin writers. First semester: Caesar. Second semester: Cicero and Ovid. Prerequisite: Two years of high school Latin or the equivalent.

*Year course (3-3) (Not offered in 1944-45)*

## LIBRARY SCIENCE

### L10 Use of the Library **J. P. Ston**

The chief object is to give a working knowledge of some of the resources of the librar which every teacher and student should understand—the decimal classification, th card catalog, periodical indexes, and the most important reference books, togethe with some instruction in the preparation of bibliographies. The course will be a requir ment of those students added to the library's staff of student assistants, although it wil not prepare the student to become a librarian.

*Fall and Spring (2)*

## MATHEMATICS

*Lower division preparation for the liberal arts major in mathematics: Mathematic 3A, 3B, 4A, and 8 with an average grade of C or better. Two or more of the followin are recommended: Astronomy 1, Economics 1A-1B, 2, Engineering 21, French A-B German A-B, Physics 1A-1B or 2A-2B, Surveying 1A.*

*Liberal arts major (upper division): Twenty-four units including at least eightee in upper division mathematics, the others being selected from Astronomy 107, Chem istry 111A-111B, 144, Physics 105A-105B, 112 and other approved courses. Th major should be arranged in consultation with the chairman of the department an completed with a grade of C or better.*

### LOWER DIVISION COURSES

### LA-LB Basic Mathematics **Livingsto**

This is a wartime emergency course, primarily for those who have not had the hig school course in plane geometry. It stresses arithmetic, informal geometry, simpl algebra and very elementary numerical trigonometry, with applications. For th present it meets the minimum lower division requirement in elementary algebra an geometry. There is no prerequisite beyond junior high school mathematics. The clas meets three times per week.

*Year Course (2-2)*

### C Intermediate Algebra **Gleason**

The course begins with an extensive review of elementary algebra. Topics covered include quadratic equations, simultaneous equations, ratio and proportion, variation, arithmetic and geometric progressions, binomial expansion and logarithms. It is equivalent to the second year-course in high school algebra. Students who have credit for high school algebra but without a recommending grade may earn two units of college credit if they carry the course with grade of *C* or better. Prerequisite: Elementary Algebra and Geometry or Mathematics LA-LB.

*Fall and Spring (4)*

### D Trigonometry

Roughly equivalent to the high school course in plane trigonometry but with more attention than is often given to those aspects needed in analytic geometry and calculus. Numerical trigonometry is stressed with application to science and industry. A brief introduction to the solution of right spherical trigonometry is included. Students who have credit for plane trigonometry in high school but without a recommending grade may earn two units of college credit if they carry the course with grade of C or better. Prerequisites: Intermediate algebra with recommending grade in at least one semester.

*Fall and Spring (3)*

### E Solid Geometry

A course in intuitive solid geometry with much attention to the calculation of surfaces and volumes for the simpler solids and for certain others used in industry. Prerequisite: Intermediate algebra, with recommended grade for at least one semester.

*Fall (2)*

### S Slide Rule

Theory and use of the slide rule. Practice in performing the fundamental operations of arithmetic. Some attention is given to more involved computations. Prerequisites: Intermediate algebra and either trigonometry or solid geometry. The class meets twice a week.

*Fall and Spring (1)*

**1 Introduction to Analysis** **Livingston**

A general course in calculus and related topics, primarily for students of social and biological sciences who do not have time for the longer courses in analytic geometry and calculus. Not available to students who have credit for Mathematics 3B. With Mathematics C taken in high school or college, this meets the "Additional Year Course" requirement for the lower division. Prerequisites: Elementary algebra and geometry, and intermediate algebra, with satisfactory grades.

*Fall and Spring (3)*

**3A-3B Analytic Geometry and Calculus** **Walling**

Analytic geometry, differential calculus, and an introduction to integral calculus. Credit is allowed for 3A taken alone if desired. Prerequisites: Elementary algebra and geometry, intermediate algebra, and trigonometry, with satisfactory grades. Students whose preparation is deficient either in quality or quantity should enroll in the appropriate remedial course.

*Year course (3-3)*

**4A-4B Solid Analytic Geometry and Calculus** **Livingston**

Integration, applications of integration, infinite series; solid analytic geometry, partial differentiation, and multiple integrals. Credit is allowed for 4A alone if desired. Prerequisites: Mathematics 3A-3B. Solid geometry is recommended; also college algebra, before 4B.

*Year course (3-3)*

**8 College Algebra** **Gleason**

Complex numbers, determinants, and other selected topics. Prerequisites: Trigonometry and either Mathematics 1 or 3A.

*Spring (3)*

**15 Spherical Trigonometry and Navigation** **Livingston**

Essentials of spherical trigonometry with applications to certain problems in navigation, particularly to those of middle latitude sailing, great circle sailing, and the determination of latitude and longitude. Prerequisites: Intermediate algebra, plane trigonometry, and some knowledge of the geometry of the sphere.

*Fall and Spring (3)*

## UPPER DIVISION COURSES

**102 Selected Topics in Algebra**

Topics supplementary to those considered in Mathematics 8 and 111. Prerequisites: Mathematics 3A-3B and 8.

*(Offered as needed)*

**104 History of Mathematics** **Gleason**

History of mathematics down to early modern times. Prerequisite: Mathematics 3A-3B, or 3A and 1.

*Fall (3) (Offered in 1945-46 and alternate years)*

**105 College Geometry** **Livingston**

An extension of the high school course in plane geometry, dealing largely with triangles and circles. Several new procedures, including inversion, are introduced. Prerequisite: Mathematics 3A-3B, or 3A and 1.

*Fall (3) (Offered in 1944-45 and alternate years)*

**106 Projective Geometry** **Livingston**

Concurrence of lines, collinearity of points and other properties of figures not altered by projections; construction and study of ellipses, hyperbolas and parabolas by means of projections. Prerequisites: Mathematics 3A-3B or 3A and 1.

*Fall (3) (Offered in 1945-46 and alternate years)*

**111 Higher Algebra** **Livingst**

Theory of algebraic equations, and other topics. Prerequisites: Mathematics 3A-3 and 8.

*Spring (3) (Offered in 1945-46 and alternate years)*

**112 Introduction to Higher Analytic Geometry** **Gleas**

Coordinates, transformations, properties of loci. Prerequisites: Mathematics 3A-3 4A, and 8.

*Spring (3) (Offered in 1945-46 and alternate years)*

**117 Intermediate Calculus** **Livingst**

Essentially the same as Mathematics 4B with additional special work for advanc students. Prerequisites: Mathematics 3A, 3B, and 4A. Credit not allowed for bo 4B and 117.

*Spring (3)*

**118 Advanced Calculus** **Livingst**

Selected topics in advanced calculus, exclusive of differential equations. Prerequisit Mathematics 4A-4B, or 4A with 4B taken concurrently.

*Spring (3) (Offered in 1944-45 and in alternate years)*

**119 Differential Equations** **Gleas**

Ordinary differential equations of first and second order, with applications. P requisite: Mathematics 4A-4B (4B concurrently if desired).

*Spring (2) (Offered in 1945-46 and alternate years)*

**124 Vector Analysis**

Addition, subtraction, multiplication, differentiation, and integration of vectors, w applications in geometry, mechanics, and mathematical physics. Some attention given to divergence, gradient, and curl. Prerequisites: Mathematics 4A (4A c currently if desired).

*Spring (3) (Offered occasionally)*

**140 Probability and Statistics** **Gleas**

Statistical theory and method from the mathematical standpoint; applications social and natural science. Prerequisites: Mathematics 4A and 8, or 4A-4B.

*Fall (3) (Offered in 1944-45 and alternate years)*

**199 Special Study** **The St**

Study of materials mainly supplementary to the courses listed above. Prerequisit Average grade of B or better in at least 12 units beginning with Mathematics 3A.

*Fall and Spring (1 or 2, each semester)*

## TWO-YEAR COURSE

**L40 Computational Mathematics** ——

Basic work in arithmetic, informal geometry, elementary algebra, and simple tri nometry. The chief emphasis is placed on computation. Not open for credit students who already have credit in elementary geometry, whether taken in high sch or in college. Open only to students enrolled in a two-year curriculum.

*Fall and Spring (3)*

## MERCHANDISING

**L20 Consumer Problems**

Growing importance of consumption as a field for study; consumer incomes in t United States; consumption and business cycles; bases of consumer choice-makir practical problems of buying food, clothing, shelter, transportation, insurance, et family budgeting; a survey of the methods by which products reach the consum market structure and functions seen from the consumer's point of view.

*Fall (3) (Not offered in 1944-45)*

**124 Principles of Merchandising**

A study of retail stores, emphasizing the problems of store managers and merchandising executives; store location, organization, personnel, sales promotion, buying and handling of merchandise, inventory, turnover, and control methods. Changing conditions in retailing, problems of profitable operation under present conditions.

*Spring (3) (Not offered in 1944-45)*

**125 Principles of Salesmanship**

Theoretical and psychological backgrounds of salesmanship, newer concepts of selling; the selling of ideas and services; steps in a sale; attention, interest, desire, closing; the development of clienteles and of good will; the personal factor in salesmanship.

*Fall (3) (Not offered in 1944-45)*

## MUSIC

*Candidates for a teaching credential in music should refer to the statement "Admission to Teacher Education Curricula" on page 21 and to the other degree requirements on that page and those following. The curriculum for the A.B. Degree with a Special Secondary Credential in Music is on page 31.*

*Lower division preparation for the liberal arts major in music: Music 1B-1C-1D; 4A-4B; 4 units of Applied Music (study of voice or orchestral instrument); Aesthetics 1A-1B.*

*Liberal arts major (upper division): twenty-four upper division units. These shall include Music 105A-105B; 106A; 107A; 119; 120; 121; 4 units of Applied Music; Aesthetics 102A-102B; and 4 units of music activity credit (Music 111, 112, 113, 115, or 130).*

*At least a C average in upper division music courses is necessary.*
*It is recommended that students in meeting degree requirements and in choosing free electives, select from the following courses: English 56A-56B; French A-B; German A-B; History 4A-4B; 146A-B; Physics 2A-2B.*

### LOWER DIVISION COURSES

**1A Musicianship—Fundamentals of Music** **L. D. Smith**

The elements of music; scale construction; elementary music theory; drill in music reading both with syllables and with words; ear training, elementary music dictation. Basic course for all general elementary credential students. Music majors receive no credit.

*Fall and Spring (3)*

**B Musicianship—Music Reading and Ear Training** **L. D. Smith**

Tonal and rhythmic dictation; rhythmic writing; sight singing. Basic course for majors and minors. Text—Smith and Krone: Fundamentals of Musicianship Book I. Prerequisite: Music 1A, or the equivalent. Students not able to pass the departmental entrance examination in the fundamentals of music will take 1A without credit in preparation for this course.

*Fall and Spring (2)*

**C-1D Musicianship—Advanced Music Reading and Ear Training** **L. D. Smith**

Tonal work in minor keys; modal scales; dissonant triads and seventh chords; interval feeling in all chords; rhythmic progression and elementary forms; rhythmic, melodic and harmonic dictation. Prerequisite: Music 1B.

*Year course (2-2)*

**12A String Instruments** **Leib**

Beginner's class in violin, viola, 'cello and string bass. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

*Fall and Spring (1)*

**L3A Woodwind Instruments** **Leib**

Beginner's class in oboe, clarinet, flute and bassoon. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

*Fall and Spring (1)*

**4A-4B Elementary Harmony** **Springston**

Scale construction, intervals, by-tones and diatonic harmonies. Transposition and original composition in the simpler forms. Text—Alchin: Applied Harmony Vol. I. Prerequisite: Music 1A-1B, or the equivalent, and at least one year of piano study.

*Year course (3-3)*

**L6A Brass Instruments** **Leib**

Beginner's class in trumpet, French horn, baritone, trombone and tuba. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

*Fall and Spring (1)*

**L7A Music Materials for the Elementary School** **L. D. Smith**

Study of the song material in the state music texts and in the supplementary texts. Appreciation materials applicable to the elementary school. Required course for all general elementary credential students. Prerequisite: Music 1A.

*Fall and Spring (3)*

**11A-B-C-D Women's Glee Club—Treble Clef** **L. D. Smith**

Entrance upon examination.

*Fall and Spring (½-½)*

**12A-B-C-D Men's Glee Club** **Springston**

Entrance upon examination.

*Fall and Spring (½-½)*

**13A-B-C-D Orchestra** **Leib**

Permission of the conductor required for membership.

*Fall and Spring (1-1)*

**15A-B-C-D A Cappella Choir**

Entrance upon examination.

*Fall and Spring (½-½) (Not offered 1944-45)*

***L16A-L16B-L16C-L16D Individual Study of an Orchestral Instrument**

*Fall and Spring (1-1)*

***L17A-L17B-L17C-L17D Individual Study of Voice**

*Fall and Spring (1-1)*

***L18A-L18B-L18C-L18D Individual Study of Piano or Organ**

Prerequisite: The ability to play artistically hymns and folk songs of the type found in the Golden Book of Favorite Songs.

*Fall and Spring (1-1)*

**20A-B-C-D Chorus** **Leib**

Open to anyone interested in singing standard choral works. No examination required.

*Fall and Spring (½-½)*

**26A-B-C-D Band** **Leib**

Permission of the conductor required for membership.

*Fall and Spring (½-½) (Not offered 1944-45)*

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* See page 94, conditions under which credit may be given for music study under private instructors.

**27A-27B Music for Enjoyment** **Springston**
A course designed for students with little or no musical background. Lectures and discussions as a basis for intelligent listening to concerts, radio programs, and class presentation of recorded music. Not open to music majors and minors.
*Year course (1-1) (Not offered 1944-45)*

**L28A-L28B Piano** **Springston**
Fundamental playing and reading technics for the pianoforte. Emphasis upon playing by ear, and the development of interpretative ability. For beginners only. No credit for music majors and minors.
*Year course (1-1)*

**29A-B Class Voice**
A class for beginners in the vocal field taking up the problems of breath control, tone placement, articulation and enunciation. Frequent performance before class required. Limited to 15.
*Year course (1-1) (Not offered 1944-45)*

**30A-B Chamber Music** **Leib**
String and woodwind ensembles. The consent of the instructor necessary for admission to class.
*Year course (1-1)*

## UPPER DIVISION COURSES

**102A-102B History of Music** **L. D. Smith**
The various movements in the development of music as related to the other arts. The chronological development of the art of music, with particular emphasis on the larger works. Considerable attention is given to the works of modern composers. Many symphonic works are studied from the orchestral scores. Music majors are required to complete additional assignments for full credit. Prerequisite: Aesthetics 1A or 1B.
*Year course (2-2)*

**105A-105B Advanced Harmony and Composition** **Springston**
Study of the possible types of modulation and chromatic harmonies: continuation of harmonic analysis and original composition. Text Alchin: Applied Harmony Vol. II. Prerequisite: Music 4A-4B.
*Year course (3-3)*

**106A Counterpoint** **Springston**
Study of the five species of counterpoint with much practice in writing in such forms. Application of contrapuntal style to modern composition. Prerequisite: Music 4A-4B.
*Fall (2)*

**107A Form and Analysis** **Springston**
Aural and visual analysis of music forms through a consideration of structure, harmonic content, and style. Prerequisite: Music 105A-105B.
*Spring (2)*

**111A-B-C-D Women's Glee Club—Treble Clef** **L. D. Smith**
Entrance upon examination.
*Fall and Spring (½-½) (A maximum of 2 units in glee club may be counted toward the A.B. degree)*

**112A-B-C-D Men's Glee Club** **Springston**
Entrance by examination.
*Fall and Spring (½-½) (A maximum of 2 units in glee club may be counted toward the A.B. degree)*

**113A-B-C-D Orchestra** **Leib**

Permission of the conductor required for membership.

*Fall and Spring (1-1) (A maximum of 4 units in orchestra may be counted toward the A.B. degree)*

**115A-B-C-D A Cappella Choir**

Entrance by examination.

*Fall and Spring (½-½) (A maximum of 2 units in A Cappella choir may be counted toward the A.B. degree) (Not offered 1944-45)*

***L116A-L116B-L116C-L116D Advanced Individual Study of an Orchestral Instrument**

*Fall and Spring (1-1)*

***L117A-L117B-L117C-L117D Advanced Individual Study of Voice**

*Fall and Spring (1-1)*

***L118A-L118B-L118C-L118D Advanced Individual Study of Piano or Organ**

*Fall and Spring (1-1)*

**119A Instrumental Conducting** **Leib**

Conducting and reading of orchestral scores.

*Fall and Spring (1)*

**120A Vocal Conducting** **Leib**

The theory of vocal conducting together with practical experience gained from directing the college chorus. Prerequisite: Music majors with senior standing.

*Fall and Spring (1)*

**121A Instrumentation** **Leib**

Arranging of music for full orchestra. Selected works of pupils to be performed by standard orchestras.

*Fall and Spring (2)*

**126A-B-C-D Band** **Leib**

Permission of the conductor required for membership.

*Fall and Spring (½-½) (A maximum of 4 units in band may be counted toward the A.B. degree) (Not offered 1944-45)*

**130A-130B Chamber Music** **Leib.**

String quintet and woodwind ensembles only. Permission of the instructor necessary for class membership.

*Year course (1-1)*

## CONDITIONS UNDER WHICH CREDIT MAY BE GIVEN FOR MUSIC STUDY UNDER PRIVATE INSTRUCTORS

Credit may be allowed for private instruction in music under the following conditions:

1. The applicant for such credit must be a regularly enrolled student in the music department of the college.

2. The instructor giving such private work must be approved by the Music Department. All private work and the names of all such teachers must be registered in the office of the music department chairman at the beginning of the semester.

3. In the case of first semester private study, a placement examination conducted by the music department faculty at the beginning of the semester will show the status of the student at the beginning of his work.

4. Evidence that the standards of the Music Department have been met will be shown by an examination conducted by the music department faculty at the end of the semester.

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* See page 94, conditions under which credit may be given for music study under private instructors.

## PHILOSOPHY

### LOWER DIVISION COURSES

**Philosophy 3A, 3B The History of Thought** **Steinmetz**

A study of the basic ideas of Western Civilization in their historical development. The making of the modern mind as revealed in the development of philosophy and in the relations between philosophy and science, art and religion. The history of ideas against the social and political backgrounds from which they came. Prerequisite: Sophomore standing, or permission of instructor.

*Fall, Spring (3, 3)*

**5A Introduction to Philosophy** **Steinmetz**

The recurring problems of philosophy and the making of the modern mind. Prerequisite: Sophomore standing, or permission of instructor.

*Fall (3)*

**5B Knowledge and Society** **Steinmetz**

Scientific method and the persistent topics of philosophy in their bearing upon the social problems of the day. Prerequisite: Philosophy 5A, save under unusual circumstances.

*Spring (3)*

**3 Social Philosophies** **Steinmetz**

The story of man's speculation regarding his "right" organization, the assumptions, analogies, and economics determining his temporary conclusions: James I. Hobbes, Rousseau, Locke, Jefferson, Kropotkin, Mill, Marx, Mussolini, Dewey, Pius XI, Hoover, Roosevelt, etc.

*Spring (3) (1944-45 and alternate years)*

### UPPER DIVISION COURSES

**120 Reflective Thinking (Logic)** **Steinmetz**

Analysis of fallacies, and the logic of argument and proof; also examination of reflective procedures in various fields of knowledge, and review of some psychological descriptions of thought. Prerequisites: Psychology 1A and Philosophy 5A.

*Fall (3)*

**130 Conduct (Ethics)** **Steinmetz**

The meaning of morality; motives and sources of belief, aspiration, ideal; psychological and sociological factors; representative ethical systems; relation of ethics to other axiological studies.

*Spring (3)*

## PHYSICAL EDUCATION

### Men's Department

*Candidates for a teaching credential in physical education should refer to the statement "Admission to Teacher Education Curricula" on page 21. For the teacher education curriculum in physical education see page 33.*

### LOWER DIVISION COURSES

A two-hour activity course each semester is required for the two years of lower division. A medical examination is given each student when entering and the work is fitted to his needs. Individual Adapted Activity sections to fit the special needs of the individual student are included. The content of the required two years is planned to give each student an opportunity to participate in those sports which have carry-over value into after life in addition to body building exercises and endurance training. Opportunity is given all students to take part in the regular competitive sports program.

Intercollegiate sports may be taken in addition to required lower division courses. A maximum of one unit in sports in one semester may be counted toward the A.B. degree.

**1A-1B Freshman Activity**

Year course, beginning either Fall or Spring ($\frac{1}{2}$–$\frac{1}{2}$)

**1C-1D Sophomore Activity**
Year course, beginning either Fall or Spring (½–½)

Class sections are so arranged that the student may choose the activity he is mo desirous of learning. Fundamentals of the sports listed are taught during a porti of the class hour.

**Sports**

**L2A-L2B-L2C-L2D** **Golf** Spring (½)
**L3A-L3B-L3C-L3D** **Track** Spring (½)
**L4A-L4B-L4C-L4D** **Baseball** Spring (½)
**L5A-L5B-L5C-L5D** **Basketball** Spring (½)
**L6A-L6B-L6C-L6D** **Tennis** Spring (½)
**L7A-L7B-L7C-L7D** **Boxing** Spring (½)
**L8A-L8B-L8C-L8D** **Wrestling** Spring (½)
**L9A-L9B-L9C-L9D** **Cross Country** Fall (½)
**L10A-L10B-L10C-L10D** **Swimming** Spring (½)
**L11A-L11B-L11C-L11D** **Fencing** (½)
**L13A-L13B-L13C-L13D** **American football** Fall (½)
**L13X-L13Y-L13Z** **Spring football** Spring (½)
**L14A-L14B-L14C-L14D** **Gymnastics** (½)
**L15A-L15B-L15C-L15D** **Badminton** Spring (½)

Any of above sports will be offered only if demand is sufficient.

*The following courses fulfill degree requirements for physical education majors an meet State requirements for teaching credentials in physical education.*

**30 Emergencies**
The accepted procedure in meeting the emergencies which daily arise in schoolroo play or athletic field, beach, mountains, or any of the many places where the physica director is called on for first aid. Special attention given to the arrangement of th apparatus and the activities so that many of the most common accidents are prevente or minimized. Course content qualifies for Red Cross Certificate.
*Fall (2)*

**L53 Physical Education in the Elementary School** **Schwo**
The content of the State program in physical education forms the basis of the cours Two lectures, two one-hour laboratory periods per week. May be taken as a substitut for 1D.

Required of all candidates for the elementary school credential and the special crede tial in physical education.
*Fall and Spring (2½)*

**L62A Gymnastic Activities** **C. E. Peterso**
Theoretical and practical work in marching, free exercises, and light and heavy appa ratus. Emphasis on progression and method of presenting material. The simplest an most explanatory terminology.
*Fall (2) (Offered in 1945-46 and alternate years)*

**L62B Gymnastic Activities** **C. E. Peterso**
Acquisition of proficiency in the performance of a great group of gymnastic stunt always popular in the gymnasium and on the playground. Work of the recreationa or self-interesting type rather than the formal. Tumbling, stunts, and pyramid building given chief attention, although games of low organizations are also considered
*Spring (2) (Offered in 1945-46 and alternate years)*

**172 Principles of Physical Education**

Cultivation of a favorable attitude for a professional study of physical education. Ideals and aims of physical education and the relation of physical education to school and society stressed.

*Fall (2)*

UPPER DIVISION COURSES

**L154 Organization and Administration of Secondary Physical Education**

Study of general and specific problems that confront physical education departments in junior and senior high schools and in colleges. Prerequisite: Physical Education 172.

*Spring (3) (Offered in 1945-46)*

**L155 Applied Anatomy and Kinesiology**

A scientific analysis of the structure, function and relationship of the organs, bony cavities, bones and joints of the skeletal, muscular, nervous and circulatory systems. In addition, the student will apply the results of the analysis in the selection of activities in relation to mechanical strength and durability as influenced by anatomical factors. Prerequisite: Zoology 20, or 108.

*Spring (3) (Offered in 1945-46 and alternate years)*

**L156A Sports Methods**

Different theories and methods of teaching the more highly organized sports: basketball and baseball.

*Fall (2) (Offered in 1944-45 and alternate years)*

**L156B Sports Methods** **C. E. Peterson**

Methods of teaching those sports most adaptable to the intramural and recreational programs: golf, handball, soccer, speedball, volley ball, badminton, archery, tennis, swimming, track, etc.

*Spring (2) (Offered in 1944-45 and alternate years)*

**161 Folk Dancing** **Schwob**

Practice in folk and clog dancing. Methods of presentation, study of costumes and customs related to the dance. Notebooks required. Open to all upper division men and women.

*Spring (2) (Offered in 1945-46 and alternate years)*

**L169A Technique of Teaching Activities**

Directed leadership in activities. A course preliminary to practice teaching in which students are given opportunity to develop teaching techniques in an orderly, detailed, directed, and supervised experience. Requirements include the handling of classes, construction of tests, lesson plans and preparation of a syllabus. One hour of lecture, and two hours of laboratory per unit. Recommended that it be taken in the junior year. Prerequisite: Admission to teacher training.

*Fall (2)*

**L169B Technique of Teaching Activities**

Continuation of directed leadership in activities as in L169A. Individual study will include conferences with instructor regarding class program, compilation of working bibliography, planned reading, school visitation, and preparation for practice teaching. Conferences and two hours of laboratory required. Prerequisite: Physical Education L169A.

*Spring (1)*

**L170 Recreational Leadership** **Shafer**

Fundamentals of recreational leadership developed by instruction in club and camp activities, the study of school recreational needs and facilities, and of civic recreation. Open to all upper division men and women. Recommended to students interested in social service.

*Spring (2) (Offered in 1944-45 and alternate years)*

**L180 Theory of Coaching Football**

Methods of coaching football. Details of teaching individual fundamentals, offensiv and defensive team play, strategy, and conditioning of athletes. Two hours o lecture and three hours of laboratory.

*Spring (2) (Not offered in 1944-45)*

**L190 Individual Program Adaptation**

An introductory course dealing with the analysis and evaluation of aims, techniques and procedures in the preventive and corrective physical education program. Specia emphasis will be given to such problems as survey of the situation, recognition o divergencies, selecting and assigning of students, instructional programs, motivation follow-up, teacher limitations, and public relations. Prerequisite: P. E. 155, Zoolog 20, and senior standing.

*Fall (3) (Not offered in 1944-45)*

## WOMEN'S DEPARTMENT

*Candidates for a teaching credential in physical education should refer to the statement "Admission to Teacher Education Curricula" on page 21, and to the outline fo the A.B. Degree with Special Credential in Physical Education on pages 34 and 35.*

### LOWER DIVISION COURSES

Two hours of directed physical activity are required throughout the freshman an sophomore years. Freshman students may choose courses from the following, L1A L1B, L1C. Sophomore students may choose from all activity courses offered.

**1A Fundamental Skills** **Schwo**

Practice in efficient fundamental body movements.

*Fall and Spring (½)*

**1B Folk Dancing** **Schwo**

*Fall and Spring (½)*

**1C Team Sports** **Shafe**

(All three are required of all women candidates for the special credential in physica education.)

*Fall and Spring (½)*

**Sophomores may elect from the following:** **Physical Education Staf**

**L2A-L2B Folk Dancing**

*Fall and Spring (½)*

**L3A-L3B-L3C-L3D Modern Dance**

*(Not offered in 1944-45)*

**L4A-L4B Social Dancing—for men and women**

*(Not offered in 1944-45)*

**L5A-L5B Archery**

*Fall and Spring (½)*

**L6A-L6B Badminton**

*Fall and Spring (½)*

**L7A-L7B Golf**

*Fall and Spring (½)*

**L11A-L11B Tennis**

*Fall and Spring (½)*

**L12A-12B Advanced Modern Dance.** Laboratory experiments in advanced choregraphy and percussion accompaniment. For men and women. Prerequisites: 1C and 3A for women, 1C for men.

*Fall and Spring (1-1) (Not offered in 1944-45)*

***Any of the above activities may be taken for additional credit.***

**53 Physical Education in the Elementary School** **Schwob**

he content of the State program in physical education forms the basis of the course. wo lectures, two one-hour laboratory periods per week. Required of all candidates r the elementary school credential and the special credential in physical education the sophomore year. Junior college transferees only may take this course in their nior year.

*pring (2½)*

## Sports

The individual activities, tennis, golf, archery, badminton and dancing are offered rough the year. Candidates for the special credential in physical education select e as a major activity and two others as minors. Skills in the activities thus selected ust be maintained as prerequisite to the senior course, Physical Education L185. See page 100.)

The Women's Athletic Association sponsors the intramural sports program. Under s direction competition in dual and group games is promoted throughout the year. pen to all college women.

### UPPER DIVISION COURSES

pen to all Women. Required of women candidates for the special credential in ysical education.

**153 Principles and Administration of Secondary Physical Education** **Schwob**

study of the significant influences shaping the trend of physical education, past and esent. The philosophy and principles of physical education and its relation to neral education. Administrative problems applied to the secondary school situation.

*all (3) (Offered in 1944–45 and alternate years)*

**155 Applied Anatomy and Kinesiology**

scientific analysis of the structure, function and relationship of the organs, bony vities, bones and joints of the skeletal, muscular, nervous and circulatory systems. 1 addition the student will apply the results of the analysis in the selection of activi- es in relation to mechanical strength and durability as influenced by anatomical ctors. Prerequisite: Zoology 20 or 8.

*pring (3) (Offered in 1945–46 and alternate years)*

**157A-L157B Sports Methods** **Shafer**

ractice for skill, study of rules, and of coaching methods. Prerequisite: A season's perience in at least four of the following sports: volley ball, basketball, hockey, eedball, soccer, baseball.

*ear course (2-2)*

**160 Principles of Teaching Gymnastics** **Schwob**

ymnastic materials and methods followed by practice in teaching marching, gym- astics and use of apparatus.

*all (2) (Offered in 1944–45 and alternate years)*

**1 Folk Dancing** **Schwob**

ractice in folk and clog dancing. Methods of presentation, study of costumes and istoms related to the dance. Notebooks required. Open to all upper division men id women.

*pring (2) (Not offered in 1944–45) Open to men and women*

**164A-L164B Methods in Modern Dance**

Laboratory experiments in advanced choregraphy and percussion accompaniment. istorical survey and practical experience in production techniques and teaching ethods. Two activity periods and one lecture per week. For men and women. Pre- equisites same as for L12A.

*ear course (2-2) (Not offered in 1944–45)*

**L169 Technique of Teaching Activities** **Schv**

Observation, lesson planning and teaching in college classes.

*Fall and Spring (3)*

**170. Recreational Leadership** **Sha**

Fundamentals of recreational leadership developed by instruction in club and ca activities, the study of school recreational needs and facilities, and of civic recreati Open to all upper division men and women. Recommended to students interested the recreational aspects of social service.

*Spring (2) (Offered in 1944–45 and alternate years)*

**L177 Individual Program Adaptations** **Schw**

Adjustments of the physical education program to the physical needs and capacit of individuals: problems concerning protective and preventive measures which are highly specialized corrective phases.

*Spring (2) (Offered in 1944–45 and alternate years)*

**L185 Technique of Individual Sports** **Sha**

A course summarizing rules, teaching methods, and individual playing ability. required senior course. Can not be taken until all requirements regarding sports a games have been fulfilled. (See page 99.)

*Fall (1)*

## PHYSICAL SCIENCES

The courses offered in the Physical Sciences are listed below. See pages listed af each subject for a more complete description of the offering under that designati Astronomy, see page 58; Chemistry, page 61; Geology, page 82; Physical Scien page 100; and Physics, page 101.

## PHYSICAL SCIENCE

*Lower division preparation for the liberal arts major in physical science and for junior certificate: Fulfillment of the department requirements for upper divis work in at least two of the following sciences: Astronomy, chemistry, geology, a physics. Recommended: A reading knowledge of French and German.*

*Liberal arts major (upper division) in physical science, required: Twenty-four units upper division work in two or more of the physical sciences: Chemistry, geology, a physics, with a minimum of six units in each of two of these sciences.*

### LOWER DIVISION COURSE

**1A Introduction to Physical Science** **Wats**

A survey course dealing with the nature of man's physical universe. Empha will be upon materials chosen from topics in astronomy and physics to show nature and development of the scientific method and man's use of energy. Not open students who have had high school or college physics and astronomy. May be tak with or without plans to continue with 1B.

*Spring (3)*

**1B Introduction to Physical Science** **Wats**

A continuation of Physical Science 1A. Emphasis will be upon units chosen fr geology and chemistry to show the origins of natural materials and their use by m in the modern world. Not open to students who have had high school or college che istry and geology. May be taken with or without credit in Physical Science 1A.

*Spring (3) (Not offered in 1944-45)*

**10 Elementary Photography**

This course seeks to provide an elementary knowledge of dark room techniques a the theory of photography including printing, enlarging, and developing. Two lectu and one three-hour laboratory required each week.

*Fall and Spring (3) (Not offered in 1944-45)*

## TWO-YEAR COURSE

**10 Man and His Physical World** **Watson**

brief survey of the nature of the scientific method and of selected topics in physical ence. Materials will be chosen from physics, chemistry, astronomy, and geology in der to give some background for an understanding of the relations of physical science modern life. Not open to students who have had both high school or college physics d chemistry or either of these subjects together with either astronomy or geology.

*en only to students enrolled in a two-year curriculum.*

*ll (3)*

## PHYSICS

*wer division preparation for the liberal arts major in physics and for the junior rtificate: Physics 1A-1B-1C-1D; Chemistry 1A-1B; Mathematics 3A-3B and 4A-4B, their equivalents. Recommended: A reading knowledge of French and German. A ximum of 12 units of lower division physics may be applied toward the degree.*

*beral arts major (upper division) in physics, required: Twenty-four units of upper vision work in physics including Physics 105A-105B and 110A-110B. Six of the enty-four units may be elected in related subjects and deviations from these requireents may be made on consultation with the chairman of the department.*

### LOWER DIVISION COURSES

**A-1B Mechanics and Heat** **Ross**

echanics, properties of matter, and heat. A development of the fundamental ideas hich underlie the subject of physics, and the application of them in the discussion of actical problems. Lectures, text assignments, problem sets, and experimental boratory work. Two lectures, and one laboratory period each week. Prerequisites: igh school physics or chemistry, and trigonometry. Students deficient in any rt of this requirement may enroll only with the permission of the instructor.

*ear course (3-3)*

**C-1D Electricity, Magnetism, Sound, and Light** **Baird**

continuation of Physics 1A-1B for students in the sophomore year. Two lectures d one laboratory period each week.

*ear course (3-3)*

**A-2B General** **Baird**

roperties of matter, mechanics, heat, sound, light, electricity, and magnetism. A nengineering course. Lectures, demonstrations, and discussions. Prerequisite: wo years of high school mathematics.

*ear course (3-3)*

**A-3B Physical Measurements** **Baird**

aboratory work in mechanics, properties of matter, heat, sound, light, electricity, and agnetism. Usually taken in conjunction with Physics 2A-2B.

*ear course (1-1)*

### UPPER DIVISION COURSES

**105A-105B Analytical Mechanics**

reatment of fundamental principles of statics, kinematics and dynamics of particles d rigid bodies. Prerequisites: Physics 1A-1B or 2A-2B and a working knowledge of lculus.

*ear course (3-3) (Offered in 1944-45 and alternate years)*

**106 Optics** **Baird**

review of reflection, refraction and dispersion, with applications to optical instruents, followed by a survey of phenomena indicative of the physical nature of light: terference, diffraction, polarization, and spectral radiation. Prerequisite: Eight nits in physics.

*all (3) (Offered in 1944-45 and alternate years)*

**106L Optical Measurements** **Ba**

Laboratory work to accompany Physics 106.

*Fall (1) (Offered in 1944-45 and alternate years)*

**107A-107B Electrical Measurements** **Ba**

Laboratory work designed to accompany Physics 110A-110B. Emphasis placed the theory and use of electrical measuring instruments.

*Year course (1 or 2 units for the year) (Offered in 1945-46 and alternate years)*

***108 Modern Physics** **Ba**

An introduction to physical investigations of the last half-century. Atomic str ture and quantum theory in the light of high-vacuum phenomena, series in opti spectra, natural and induced radioactivity, and allied subjects. Prerequisite: Ei units in physics.

*Spring (3) (Offered in 1944-45 and alternate years)*

**108L Modern Physics Laboratory** **Ba**

Laboratory, to accompany Physics 108.

*Spring (1) (Offered in 1944-45 and alternate years)*

**110A Introduction to Electricity and Electromagnetism** **Ba**

Elements of the mathematical theory of electrostatics, of magnetostatics and m netism, and of steady and varying currents. Students are encouraged to accompa the course with 1 unit of laboratory work. Prerequisites: Eight units in physi and Mathematics 3A-3B.

*Fall (3) (Offered in 1945-46 and alternate years)*

**110B Principles of Electromagnetism and Electronics** **Bai**

A more complete study and an extension of the material surveyed in Physics 110 illustrated with practical applications. Prerequisites: Physics 110A and consent the instructor.

*Spring (3) (Offered in 1945-46 and alternate years)*

**112 Advanced Heat and Thermodynamics**

Thermal properties of matter. An introduction to the kinetic theory of gases and t laws of thermodynamics. Prerequisites: Eight units in physics and a worki knowledge of calculus.

*Spring (3) (Not offered in 1944-45)*

**112L Advanced Heat Laboratory**

Laboratory work in thermal expansion, specific heat, heat of combustion, radiati and other related topics in advanced heat. Designed to accompany Physics 112.

*Spring (1) (Not offered in 1944-45)*

**113L Pyrometry Laboratory**

Laboratory work in the calibration and use of various temperature measuring devic Prerequisite: Eight units in physics.

*Spring (1) (Not offered in 1944-45)*

**114 Sound Waves and Acoustics**

A study of wave motion and its applications to the production, transmission a reception of sound. Architectural acoustics, speech and hearing, acoustical a musical instruments. Prerequisite: Eight units in physics.

*Fall (3) (Not offered in 1944-45)*

**114L Advanced Sound Laboratory**

Laboratory work in the problems of wave motion, standing waves, velocity of sou in various media, diffraction and interference, of sound. Designed to accompa Physics 114.

*Fall (1) (Not offered in 1944-45)*

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* Will be offered if there is sufficient demand.

**115L Applied Acoustical Measurements**

Laboratory work in various practical applications of acoustics. Directional and frequency characteristics of loudspeakers and microphones. Architectural acoustics. Prerequisite: Eight units in physics.

*Fall (1) (Not offered in 1944-45)*

**199 Special Study** **Baird**

Reading or work on special problems in physics. Admission by consent of the instructor. Credit and hours to be arranged in each case. Open to students who have completed at least eight units of work in the department with grade of *A* or *B*.

*Fall and Spring (1 or 2-1 or 2)*

## PHYSIOLOGY

### LOWER DIVISION COURSES

**1A Human Physiology** **Crouch**

A lecture course considering the functions of the human body. Prerequisites: Elementary chemistry and high school or college biology or zoology. Three hours of lecture per week. Credit reduced to 2 units, for students having credit for Zoology 20.

*Spring (3)*

**1C Human Physiology** **Crouch**

A study of the human functions through laboratory experiments and demonstrations. Prerequisites: Physiology 1A completed or in progress. Six hours of laboratory per week.

*Spring (2)*

## POLITICAL SCIENCE

*The minor in political science: from twelve to eighteen units of work is recommended. At least half the work should be chosen from upper division courses.*

*It is suggested that students who expect to major in political science plan their lower division work to include both Political Science 1A-1B and 71A-71B, and either Economics 1A-1B or History 4A-4B.*

### LOWER DIVISION COURSES

**1A-1B Comparative Government** **Leonard**

A comparative study of typical governments. Semester I: England, France, and Switzerland. Semester II: Italy, Germany, Russia, and Japan.

*Year course (3-3)*

**71A-71B American Government and Politics**

71A—Governmental organization in the United States; the federal system, organization, powers and functions of the legislative, executive and judicial branches of the national government, and the expansion of its activities.

71B—Development of the means of democratic control of government in the United States; the history, motivation, methods and control of political parties; party machines; election systems; influence of minority groups; the lobby; the press.

This course is not open to freshmen.

*Year course (3-3) (Not offered in 1944-45)*

### UPPER DIVISION COURSES

**101 American Institutions** **Leonard**

A study of the principles of the Constitution of the United States, and a survey of the political and social institutions which have developed under it.

*All candidates for the bachelor's degree are required by State law to secure credit in this course, unless they have completed one of the following courses: History 171A-171B, 173A-173B, Political Science 113, 175A-175B. This course is offered only in the fall semester.*

Enrollment is limited to students of junior or senior standing, except with the consent of the instructor.

*Fall (2)*

**111 Theory of the State** **Leonard**
The nature of the State, its organization and activities, and its relation to the individual and to other states. Special attention will be given to recent developments in the field of political thought.
*Fall (3)*

**113 American Political Ideals** **Leonard**
Underlying theories and principles of American governmental policy.
*Spring (3) (Offered in 1944-45 and alternate years)*

**133A-133B Principles of International Law**
This course is concerned with the function of law in the international community. The historical development of the theory and rules of international law, the application of international law in international relations and the application of international law in national courts will be studied.
*Year course (3-3) (Not offered in 1944-45)*

**136A-136B Problems of the Pacific Area**
Particular emphasis during the first semester on the development through the 19th Century of the governmental problems of the Far East, both internal and international. The second semester will be devoted to a consideration of the 20th Century aspects of these problems.
*Year course (3-3) (Not offered 1944-45)*

**141 Theories of International Relations**
The development of ideas concerning international relations from ancient through modern times. Theories of nationalism, imperialism, internationalism, and cosmopolitanism will be reviewed and their validity considered in the light of modern experience.
*Fall (3) (Not offered in 1944-45)*

**142 International Organization**
Prewar attempts at international organization, the effect of the World War on ideas of international relationships, postwar attempts at organization. Special attention will be given to the organization and development of the League of Nations, its machinery, accomplishments and failures, and to national attitudes toward cooperation since the war.
*Spring (3) (Not offered in 1944-45)*

**143A-143B Principles of Public Administration in the United States**
A study of the development of executive agencies in the American federal government and the relationship between these agencies and the changes in American concepts concerning the proper field of governmental activity.
*Year course (3-3) (Offered in 1945-46 and alternate years)*

**175A-175B—American Constitutional Development** **Leonard**
A study of the work of the Convention of 1787, and of significant phases of American constitutional law.
*Year course (3-3)*

## PSYCHOLOGY

*Lower division preparation in psychology for advanced work. Recommended: Psychology 1A-1B, Zoology 1A-1B or Biological Science 10A-10B, Philosophy 3A-3B or 5A-5B, Mathematics 8, a language and some physics, anthropology and sociology.*

### LOWER DIVISION COURSES

**1A General** **Staff**
An elementary survey of normal adult psychology, focused upon personality; the subjective and objective aspects of behavior. Furnishes basis for all other courses in psychology.
*Fall and Spring (3)*

### B General Applied **Steinmetz**

continuation of general psychology designed to familiarize the student with (1)
ementary statistical methods and (2) fields of applied psychology and possibly
3) some one topic (not included in upper division courses) in which he pursues an
ndependent experimental approach if judged advisable or for additional unit. Pre-
requisite: Psychology 1A. Required for advanced study.

*all and Spring (3)*

### A Applied

pplications of psychology to problems of the individual in learning, making social
djustments, choosing a vocation, developing desirable personal traits, and achieving
uccess and happiness. Surveys of psychology as applied in education, music, art,
peaking, writing, law and medicine. Prerequisite: Psychology 1A. Recommended:
sychology 1B.

*all (3) (Not offered in 1944-45)*

### B Psychology Applied in Business **Steinmetz**

pplications of psychology to a wide range of problems encountered by business.
otives, attitudes, habits, and traits in their relation to behavior of employer,
mployee, and executive. Advertising, salesmanship, and problems of selecting,
lacing and increasing the efficiency of employees. Business cycles and consumer
esearch. Prerequisite: Psychology 1AB or equivalent.

*pring (3) (Offered in 1945-46 and alternate years)*

### C Psychology in Industry

tudy of time, motion, lighting, fatigue; selection, placing, training, evaluating per-
onnel; industrial interviewing, counseling, adjusting for morale and efficiency; direct
bservation, visiting speakers, and chance for specialization allowed. Prerequisite:
A-1B or equivalent.

*pring (3) (Offered in 1944-45 and alternate years)*

UPPER DIVISION COURSES

### 02A Genetic: Child

his course represents the main effort of the psychology department to provide an
rientation toward parenthood. The course has been developed in recognition of the
eed for the establishment of parental-domestic adjustment through the study of child
rowth and development from the prenatal period to adolescence and through common
nowledge by parents of relevant material in genetics and child psychology; emphasis
s practical.

*all (3) (Not offered in 1944-45)*

### 02B Genetic: Adolescence

urvey of the wealth of knowledge in physiology, sociology, and psychology recently
nade available to parents and professional workers with youth just before, during, and
fter puberty.

*pring (3) (Not offered in 1944-45)*

### 18 Mental Hygiene

roblems, personality adjustment, emotional problems, attitudes, conflicts, neurotic
ehavior, conduct disorders of both child and adult.

he beginnings of undesirable attitudes and habits and methods of treating them are
tressed more than serious cases of maladjustment which are either incurable or
roblems for a psychiatrist. The methods of building wholesome personality are
mphasized more than the analysis of extreme disorders. Prerequisite: Psychology
A. Recommended: Psychology 1B, 102.

*pring (3) (Not offered in 1944-45)*

### 45 Social Psychology **Steinmetz**

ersonality as it develops in relation to social environment. Suggestion, imitation,
eadership, the crowd, public opinion, social control, prejudice, propaganda, sex differ-
nces, race differences, etc. Prerequisite: Psychology 1A. Recommended: Psy-
hology 4A.

*Fall (3) (1945-46)*

**150 Abnormal Psychology** **Steinme**

The relation of psychology to the psycho-neuroses and insanity; the appearance abnormal traits in incipient stages of mental disturbances. Methods of diagnosis ar early treatment.

*Fall (3) (Offered in 1944-45 and alternate years)*

**151 Clinical Psychology** **Steinmet**

A study of diagnostic individual tests, the interview, and especially personality test and of psychotherapeutic principles, for intensive study of personality and face-to-fac judgment. Specialization is determined by individual needs.

*Spring (3)*

**160 Experimental Psychology of Learning**

Introduction to instrumental and comparative psychology and to methods of researc in the development of behavior theory. Prerequisite: 5 units of other work in th department and consent of the instructor; required of those seeking a major.

*Fall (3) (Not offered in 1944-45)*

## TWO-YEAR COURSE

**L40 Psychology and Life** **Perr**

An elementary survey of normal adult psychology, focused upon psychological prin ciples in relation to life situations. Open only to students enrolled in a two-yea curriculum.

*Fall and Spring (3)*

## SECRETARIAL TRAINING

**LA Business Mathematics**

A practical course in the mathematics of business. A thorough study of interest compound interest, discount, amortization tables, insurance rates, etc.

*Fall and Spring (1) (No credit will be counted toward A.B. degree requirements except in the curricula leading to the Business Education Credential)*

**L1A-L1B Typewriting** **Amsder**

A rapid development of a thorough command of a keyboard by the touch method. Th acquisition of speed and the artistic arrangement of typewritten material with specia reference to commercial forms, tabulation and billing; specifications, legal forms, an preparation of manuscripts; transcription, mimeographing, etc. Eight hours lectur and laboratory practice.

*Year course (3–3) (No credit will be counted toward A.B. degree requirements excep in the curricula leading to the Business Education credential)*

**L2A Typewriting** **Amsden**

A short course designed for those not wishing to enter the business office but desiring a knowledge of the use of the typewriter. Five hours laboratory practice.

*Spring (2)*

**L3A Office Methods and Appliances** **Wright**

Practice and principles of office management, including organization, arrangement and operation. Study and use of modern office appliances such as the multigraph, mimeograph, filing devices, calculating and bookkeeping machines. Prerequisite: Secretarial Training 1A or its equivalent.

*Fall (3) (No credit will be counted toward A.B. degree requirements except in the curricula leading to the Business Education Credential)*

**L5A-L5B Stenography** **Amsden**

An intensive course designed for the practical preparation of office secretaries. A thorough study of the Gregg System. Development of the ability to read and write shorthand rapidly and correctly, both literary and commercial. The shorthand speed necessary to pass a civil service examination is attained by the end of the year.

*Year course (5-5)*

**L6A-L6B Advanced Stenography** **Amsden**

Development of speed in writing and transcription. Advanced dictation on letter forms, legal forms, speeches, and literary and technical material.

*Year course 3-3*

**English in Business** *(See English, page 75)*

## SOCIAL SCIENCES

*The courses offered in the Social Sciences are listed below. See pages listed after each subject for a more complete description of the offerings under that designation. Anthropology, see page 54; Economics and Commerce, page 63; Geography, page 80; History, page 84; Political Science, page 103; Social Science, page 107; and Sociology, page 108.*

## SOCIAL SCIENCE

*Lower division preparation for the liberal arts major in social science: Fulfillment of the departmental requirements for upper division work in at least three of the following sciences: Anthropology, economics, geography, history, political science, sociology. Liberal arts major (upper division) in social science, required: Twenty-four units of upper division work including a concentration of twelve upper division units in one of the following fields and six units in each of two others: Anthropology, economics, geography, history, political science, sociology.*

*This major is available only to students who are preparing for graduate work in anthropology, political science, or sociology, and to those enrolled in certain preprofessional and other curricula. Official approval for candidacy for a degree with a social science major must be obtained from the dean of liberal arts.*

### LOWER DIVISION COURSES

**1A Contemporary Political, Social and Economic Problems** **A. G. Peterson**

An analysis of major problems of the present day with reference to the conditions out of which they arise and with regard to their essential unity and interrelationships. Particular attention to implications of the war and post-war problems. An attempt to introduce the student to sound methods of approach in dealing with these problems.

*Fall and Spring (3)*

**1B American Trends Since 1918**

Main currents of American life since the World War. Stress on immediate background of modern institutions. Aims to familiarize students with the major events which have occurred during the lifetime of the present college generation.

*Fall and Spring (3) (Not offered in 1944-45)*

### TWO-YEAR COURSES

**L40 Contemporary Problems** **Barnhart**

A survey of the major political, social, and economic forces in modern American life. Chief problems are analyzed in relation to their setting, and students are given sound methods of approach in dealing with them. *Open only to students enrolled in a two-year curriculum.*

*Fall (3)*

**L45 American Democracy** **Barnhart**

The structure and function of government, as it relates to individual Americans. Special emphasis on popular participation through voting, political parties, pressure groups, and public opinion. Prerequisite: Sophomore Standing. *Open only to students enrolled in a two-year curriculum.*

*Spring (3)*

## SOCIOLOGY

*Lower division preparation for the liberal arts major in social science with concentration in sociology: Sociology 50A, 50B; Economics 1A-1B and one of the following year courses: Anthropology 50A-50B, Political Science 1A-1B, 71A-71B. See requirements for the social science major, page 107.*

### LOWER DIVISION COURSES

**50A Introduction to Sociology** **Barnhart**

A study of modern social problems recognizing the geographic, economic, psychological, and sociological factors involved. Emphasis is on a scientific method of approach. An evaluation of various causes and solutions of problems is made.

*Fall (3)*

**50B General Sociology** **Barnhart**

A course in general sociology for upper division students. The development and use of the concepts of sociological analysis, such as human nature, the effects of isolation and social contacts upon the development of personality; social interaction; social processes; social forces; social control; collective behavior; and social progress.

*Spring (3)*

**55 Marriage and Family Life** **Perry**

A psychological and sociological approach to the study of marriage and the family. Some of the topics considered are: relation of courtship to marriage; emotional maturity and marriage; eugenic aspects of marriage; college marriages; harmony in modern marriage; economic adjustment in marriage, parenthood. Prerequisite: Health Education 1 or 2; a biological science and Psychology 1A recommended. Not open to Freshmen.

*Fall (3)*

**105 Social Pathology** **Barnhart**

A study of the alleged abnormal phenomena in society; family disorganization and personal demoralization; pathology of individual and group relationships and of economic, social, and cultural relationships.

*Fall (3)*

**106 Criminology and Penology** **Barnhart**

The extent and characteristics of crime; consideration of physical, mental, economic, and sociological causes of crime; study of methods of penal discipline, prison labor, parole, and probation; programs of prevention.

*Spring (3) (Offered in 1944-45 and alternate years)*

**108 The Family** **Barnhart**

History of marriage and family as a social institution. Effects of various economic and social factors on the modern family; higher education and the birth rate; married women in industry and professions; causes of desertion and divorce and their sociological effects. Not open to students who have credit for Sociology 55.

*Spring (3) (Offered in 1945-46 and alternate years)*

**109 Fields of Social Work** **Barnhart**

A survey of the nature of social work and the various kinds of social work which are found in modern urban life. The student is familiarized with the various social agencies in the community, their problems and methods of work, by readings and field trips. Volunteer social work in some social agency recommended.

*Spring (3)*

**126 Social Reform Movements**

A study of organized efforts to change social institutions in the United States since 1865. Emphasis given to backgrounds, objectives, techniques, and relationship to democracy of each movement.

*Fall (3) (Not offered in 1944-45)*

**197 Urban Sociology** **Barnhart**

A study of the structure and function of the modern city; types of neighborhoods; forms of recreation; social forces in a metropolitan area; types of urban personalities and groups; rural-urban conflicts of culture. Practical field studies required.

*Fall (3)*

## TWO-YEAR COURSE

**L45 Marriage and the Family** **Perry**

The purpose of this course is to prepare young people for successful marriage and family life. The development of the personality through family relationships, the choice of a life partner, and the social and economic factors involved in the establishment of a home, are given special emphasis. The importance of the family as a unit in larger social groupings is stressed, and both psychological and material factors which affect the welfare of family members are brought to the student's attention. *Open only to students enrolled in a two-year curriculum.* Prerequisite: Sophomore standing.

*Spring (3)*

## SPANISH

*Lower division preparation for the liberal arts major in Spanish: Spanish A-B-C-D; French A-B; History 4A-4B.*

*Liberal arts major in Spanish: Twenty-four units of upper division work, of which at least eighteen must be in Spanish, and of which a maximum of six may be in related subjects, arranged in consultation with the chairman of the department. At least a C average in upper division major courses.*

### LOWER DIVISION COURSES

**A-B Elementary** **Phillips, L. P. Brown**

Intensive study of Spanish grammar and syntax, with daily written work; class drill in conversational idiom and pronunciation; reading with oral discussion and résumé; dictation; introduction to contemporary prose writers. Credit not given for Spanish A unless followed by Spanish B. Students who have had one year of Spanish in high school should register for two units of work in Spanish A. Those who have had two years of Spanish in high school should register for four units of work in Spanish B.

*Year course (5-5)*

**C-D Intermediate Spanish** **Phillips**

Reading and composition: study of standard prose as basis for class work; collateral reading in prose and drama, with written reports in Spanish; dictation. Class work conducted mainly in Spanish. Individual conferences. Prerequisite: Spanish B or three years of high school Spanish, or its equivalent. Students with credit for four years of high school Spanish, or its equivalent, should enter Spanish D.

*Year course (3-3)*

**1-2 Elementary**

*Year course (3-3) (Not offered in 1944-45)*

**50 Spanish Commercial Correspondence** **Phillips**

A one-semester intermediate course in Spanish composition, directed along the line of commercial correspondence. A practical course, with translation of real business letters, and supplementary reading in Spanish on commercial subjects. Prerequisite: three or four years of high school Spanish, or completion of Spanish C or D.

*Fall (3)*

### UPPER DIVISION COURSES

**101A-101B Conversation and Composition** **Phillips**

Prerequisite: Spanish D, or its equivalent, with grade of *C*.

*Year course (3-3) (Offered in 1945-46)*

**102A-102B Introduction to Spanish Classics** **L. P. Brown**

Reading from several types of classical literature. Lazarillo de Tormes and other novels of Roguery; selections from Don Quixote, and the Cien Mejores Poesias Castellanas; one drama each from the works of Lope de Vega, Calderon, Alarcon, and Moreto; collateral reading and reports. Prerequisite: A grade of *C* in Spanish D or permission from the instructor.

*Year course (3-3) (Offered in 1946-47)*

**104A-104B Spanish-American Literature** **Phillips**

Reading from representative Spanish-American authors during the colonial, revolutionary and modern periods. Lectures, class reading, collateral reading and reports. Prerequisite: A grade of *C* in Spanish D or permission from the instructor.

*Year course (3-3)*

*See also* **English 104, Latin-American Literature in English,** *which may be taken for Spanish credit.*

**105A-105B Modern Spanish Drama** **L. P. Brown**

The development of the drama of Spain from the beginning of the nineteenth century to the present time. Prerequisite: A grade of *C* in Spanish D or permission from the instructor.

*Year course (3-3) (Offered in 1947-48)*

**110A-110B Novel and Short Story in Spain** **L. P. Brown**

The development of the novel and short story in Spain from 1830 to the present time. Prerequisite: A grade of *C* in Spanish D or permission from the instructor.

*Year course (3-3) (Offered in 1945-46)*

**199 Comprehensive Reading and Survey Course** **The Staff**

Designed to fill up the gaps in the reading done in courses. Class meeting once a week for guidance, reports, and quizzes. Required of all seniors majoring in Spanish.

*Spring (3)*

## SPEECH ARTS

*Lower division preparation of the Liberal Arts major in Speech Arts: At least 18 units of lower division courses in Speech Arts, including 1A, 1B, and six units chosen from 55A, 55B, 55C, 55D. Recommended: Aesthetics 1A, 1B, 50; Art 52A, 94.*

*Upper division requirements for the Liberal Arts major in Speech Arts: At least 18 units in upper division courses in Speech Arts, including 150, 163A, and six units from 155A, 155B, 156A, 156B. Also required: six units from English 112, 113, 117A, 117B, 152A, 152B. Recommended: English 110, 116B; French 105A, 105B; Physical Education 164A, 164B; Spanish 105A.*

*Candidates for the teaching credentials in Speech Arts should refer to "Admision to Teacher Education Curricula" on page 21 or to the note regarding the Special Credential in Speech Arts on page 35.*

### LOWER DIVISION COURSES

**1A Fundamentals of Public Speaking** **F. L. Johnson**

Training in fundamental processes of oral expression; methods of obtaining and organizing material; outlining principles of attention and delivery; extemporaneous speaking and open forum debating; practice in construction and delivery of type forms of speech.

*Fall and Spring (3)*

**1B Extemporaneous Speaking (or Forum Speaking)**

Practice in extemporaneous speaking on subjects of current interest both national and local, with stress laid on the organization and delivery of content material. Forum discussion will provide speakers with the opportunity of assembling facts quickly to meet such questions as any audience situation might demand.

*Spring (3) (Not offered in 1944-45)*

### Oral Interpretation **Jones**

he oral interpretation of longer literary selections, both in poetry and prose; a funda-
entals course designed for the beginning students in drama as well as those majoring
English literature.

*all (3) (Not offered in 1944-45)*

### Advanced Interpretation **Jones**

mphasis placed on stage poise and grace with adequate attention given to variations
the presentation of literary selections. Much opportunity is provided for individual
id group creative work. No prerequisite. Class limited.

*pring (3)*

### Corrective Speech

orrective laboratory training prescribed on the basis of vocalization tests made on
lectro-Vox Recording Machine. Required of education majors who fail to meet
eech requirements test. Private clinical assistance given to stutterers and lispers.

*all and Spring (1) (9 weeks' course) (Not offered in 1944-45)*

### 5A-55B Dramatic Production **Jones**

course for first and second year students in which, through participation, they
quire an understanding of certain dramatic periods and types studied in English
terature. Individual and group expression coordinated and developed in production
scenes, acts, and plays—a fundamental drama course emphasizing modern trends.
o prerequisite.

*ear course (3-3) (Offered in 1945-46 and alternate years)*

### 5C-55D Dramatic Expression **Jones**

course to help students realize and develop their creative abilities for expressing
fe and character through acting and writing. History, technique and theory of
arious dramatic forms studied, created and presented through workshop methods.
fundamental course planned for students desiring specialized training in drama or
riting. Prerequisite: Consent of instructor.

*ear course (3-3) (Offered in 1944-45 and alternate years)*

### 0 Augmentation and Debate

btaining and organizing of evidence and the construction and use of the brief;
tudy and discussion of current issues; the presentation of formal and informal
ebates. Attention to intramural and intercollegiate debating.

*pring (3) (Not offered in 1944-45)*

### 1A-61B-61C-61D Intercollegiate Debate

*ear course, each year (1) (Not offered in 1944-45)*

### 3A-B-C-D Verse Choir **Jones**

articipation in verse speaking chorus to develop quality, range of tone, and ability
n dramatic visualization of poetry. Required for speech arts credential.

*all and Spring (1-1)*

### 02 Organized Discussion

onsideration of the symposium, the panel, the open forum, the business session,
nd varieties of conference speaking. Emphasis upon organization and presentation.
ttention to parliamentary procedure for informal groups.

*all (3) (Not offered in 1944-45)*

### 08 Art of Interpretation

nalysis of various types of literature. Material chosen will emphasize the finer
echniques of oral expression to develop the imagination, the emotional power, read-
ng skill and platform deportment in its varied phases. Prerequisite: One year of
ollege Speech or equivalent.

*pring (3) (Not offered in 1944-45)*

**110 Recreational Reading** **Dickha**
See English, page 76.

**112 History of the English Language**
See English, page 76.

**113 American English**
See English, page 76.

**116B The Elizabethan Drama** **F. L. Johnso**
See English, page 77.

**117A-117B Shakespeare** **F. L. Johnso**
See English, page 77.

**150 Phonetics**
Auditory and kinaesthetic analysis of the sounds of the English language. Valuabl as a corrective course in pronunciation and articulation. Required of speech major and those seeking Speech Correction Credential.
*Fall (2) (Not offered in 1944-45)*

**152A Survey of Drama: Comedy**
See English, page 78.

**152B Survey of Drama: Tragedy**
See English, page 78.

**155A-155B Advanced Dramatic Expression** **Jone**
For upper division students training for leadership in different fields as well a drama. More advanced forms of dramatic expression studied; creative abilities i interpretation, writing, acting, and stagecraft developed in relation to variou subjects and activities conducted through individual research projects, group discus sion and participation. Original work encouraged. Prerequisite: A fundamenta drama course.
*Year course (3-3) (Offered in 1945-46 and alternate years)*

**156A-156B Advanced Dramatic Production** **Jones**
The study of more difficult dramatic types and periods in the production of poeti and prose literature of different countries. Arrangement, organization, creation, direction and presentation of class room, recreational and other forms of performances. Practical participation and demonstration. A course designed for students majoring in other subjects as well as the theater arts.
*Year course (3-3) (Offered in 1944-45 and alternate years)*

**157A-157B Radio Production** **Jones**
Preparation and production of radio plays and various types of radio material.
*Fall and Spring (3-3)*

**163A Rhythm, Pantomime and Choric Verse** **Jones**
A course combining bodily movement with group speaking. Presents the fundamentals of rhythm and pantomime in different forms of dramatic expression.
*Spring (3) (Offered in 1945-46 and alternate years)*

**163B Advanced Rhythm, Pantomime and Choric Verse** **Jones**
Continuation of above.
*Spring (3) (Offered in 1944-45 and alternate years)*

**175 Major Speech Disorders**
Clinical survey of newest methods of speech correction with special emphasis given to stammering and cleft-palate speech. One of required courses for Special Corrective Credential.
*Spring (3) (Not offered in 1944-45)*

## TWO-YEAR COURSE

**L40 Fundamentals of Public Speaking**

Training in fundamental processes of oral expression; practice in organization and presentation of material; emphasis upon speech in daily situations, including public discussion, conversation, recitation, extemporaneous speaking, and short speeches for special occasions. *Open only to students enrolled in a two-year curriculum.*

*Fall and Spring (3) (Not offered in 1944-45)*

## ZOOLOGY

*Lower division preparation for the liberal arts major in zoology: Zoology 1A, 1B, and high school chemistry, Chemistry 1A-1B or 2A-2B. Recommended: German or French, Botany 2A, 2B, 4.*

*Liberal arts major in zoology: (1) At least a C average in upper division major courses. (2) Twenty-four units of upper division courses in zoology or eighteen in the major subject and six in related courses in botany, chemistry, physics, physiology or bacteriology.*

*Students preparing to teach science in the junior high school should try to include courses in zoology, botany, physiology, bacteriology, physics, chemistry (at least high school chemistry). Courses designed to help the student get acquainted with wild life of the region should be included. Recommended: Botany 4, 104, 102; Zoology 112, 113A, 113B, 113C, 121.*

### LOWER DIVISION COURSES

**1A General Zoology** **Harwood**

An introduction to animal biology dealing with structure, functions, and evolution of animal life. Laboratory work supplementing the lectures and based on the study and observation of living and preserved material (frogs and invertebrates). Valuable to the general student as well as to the biology specialist, acquainting him with the fundamental facts and theories of biology as they pertain to animal life. Two lectures or recitations and six hours of laboratory per week. Students who have credit for Biology 10A-10B receive no credit for Zoology 1A but receive credit for Zoology 1B.

*Fall (4)*

**1B General Zoology** **Harwood**

A continuation of 1A. The structure, relationships, and classification of the chordates. Two lectures and six hours of laboratory per week. Prerequisite: Zoology 1A or Biology 10B.

*Spring (4)*

**4 Microtechnique** **M. E. Johnson**

Introduction to methods of preparation of tissues for microscopic study. Six hours of laboratory per week. Prerequisite: elementary chemistry.

*Spring (2)*

**8 Human Anatomy** **Crouch**

A study of human structure through the use of models, prepared dissections and microscopic slides. Prerequisite: high school biology, Biology 10A, 1, or Zoology 1A. Two hours of lecture and three hours of laboratory per week. Required of prenursing students. Not open to premedical students. Credit reduced to 2 units if student has credit for Zoology 20.

*Fall (3)*

**20 Human Anatomy and Physiology** **Crouch**

An elementary course in human anatomy and physiology. Prerequisite: High school biology, or Biology 1 or 10A or Zoology 1A. Lectures three hours per week. Credit reduced to 2 units if student has credit for Zoology 8 or Physiology 1A.

*Fall and Spring (3)*

### UPPER DIVISION COURSES

**100 Embryology** **M. E. Johnson**

The development of vertebrates as illustrated by the frog, chick, and pig. Three hours of laboratory and three hours of lecture and quiz per week. Prerequisite: Zoology 1B or Biology 10B.

*Spring (4)*

**100D Microtechnique** **M. E. Johnson**

Introduction to methods of preparation of tissues for microscopic study. Three hours of laboratory per week. Prerequisite: elementary chemistry and embryology completed or in process.

*Spring (1)*

**106 Comparative Anatomy of the Vertebrates** **Crouch**

Dissection, study and comparison of organ systems of typical vertebrates. Two hours per week of lecture and six hours of laboratory. Prerequisite: Zoology 1B or Biology 10B.

*Fall (4)*

**108 Human Anatomy** **Crouch**

Lectures and laboratory work of Human Anatomy 8 with an additional hour of seminar each week. Open only to upper division students by special arrangement.

*Fall (3)*

**112 Marine Invertebrates** **M. E. Johnson**

Identification and study of behavior and life histories of invertebrates of the San Diego region. Frequent collecting trips to the beaches required. Prerequisite: Zoology 1A or Biology 10B. One hour of lecture and six hours of laboratory or field work per week.

*Fall (3) (Offered in 1945-46 and alternate years)*

**113A Taxonomy and Natural History of the Mammals** **Harwood**

Frequent field trips and the identification of museum material. Three hours of laboratory per week.

*Spring (1) (Offered in 1944-45 and alternate years)*

**113B Ornithology** **Crouch**

The study and identification of birds, especially those of the Pacific Coast and the San Diego region. One hour of lecture and six hours per week of laboratory, or field excursions. Prerequisite: Zoology 1B or Biology 10B.

*Spring (3) (Offered in 1944-45 and alternate years)*

**114A Genetics** **Harwood**

General introductory course designed to acquaint the student with the fundamental principles of heredity and variation. Special attention given to the Mendelian interpretations of the facts of inheritance. Two lectures per week.

*Fall (2)*

**114B Evolution** **M. E. Johnson**

The development of theories of evolution. Two lectures or discussion periods per week.

*Spring (2)*

**121 General Entomology** **Harwood**

The classification, life history, structure, and physiology of insects. Prerequisite: Zoology 1A or Biology 10B. Two hours of lecture and six hours of laboratory per week.

*Spring (3)*

**122 Systematic Entomology** **Harwood**

Classification of insects with especial emphasis on a group of insects of the student's choice. To be taken with or to follow 121. May be repeated for credit but with a total of not more than 2 units. Three to six hours of laboratory work each week.

*Spring (1 or 2)*

**Scientific Illustration** **Johnson**

struction and practice in various methods used to illustrate scientific publications. commended course in preparation for this one: Art A-B.

*ll (2)*

**5 Medical Entomology** **Harwood**

e role of insects and other arthropods in transmission and causation of human dises. Three hours of laboratory and one hour of lecture per week. Prerequisite: ology 1A or Biology 10B.

*ll (3) (Offered in 1945-46 and alternate years)*

**) Readings in Biology** **Harwood**

ading from a suggested bibliography with informal class discussion of topics. bjects discussed will include history of biology, biological principles, ecology, nomic zoology, zoogeography, breeding habits, animal behavior.

*ring(2) (Offered in 1945-46 and alternate years)*

**9 Special Study** **The Staff**

ork other than is outlined in the above courses. Admission only by consent of the structor with whom the work is to be done. Credit and hours to be arranged in ch case. Open to students who have completed at least fifteen units of Zoology with rade of A or B.

*ll and Spring (1 or 2)*

# DIRECTORY
## (1943-44)

HEPNER, WALTER R.------------------------------------------------Preside
A.B., 1913, M.A., 1916, Ed.D., 1937, University of Southern California.
San Diego State College since 1935.

ADAMS, JOHN R.----------------------------------------Professor of Engli
A.B., 1920, A.M., 1922, University of Michigan; Ph.D., 1940, University
Southern California. At San Diego State College since 1928.

†ALCORN, MARVIN DOUGLAS---------------Assistant Professor of Educatio
Director of Teacher Placeme
A.B., 1925, Southwestern College; A.M., 1931, Teachers College, Columbia Ur
versity; Ed.D., 1942, University of Southern California. At San Diego Sta
College since 1941.

*ALLEN, HAROLD BYRON----------------------Assistant Professor of Engli
A.B., 1924, Kalamazoo College; A.M., 1928, Ph.D., 1940, University of Mick
gan. At San Diego State College since 1940.

AMSDEN, GEORGIA C.-------------------------Associate Professor of Commer
Diploma, Gregg School, Chicago. At San Diego State College since 1925.

AULT, JESSE W.---------------------Dean of Education, Professor of Educati
B.S., B.Pd., 1910, Valparaiso University; M.A., 1925, University of Sou
Dakota. One year graduate study since 1925 at Claremont Colleges ar
University of Southern California. At San Diego State College since 1925.

BACON, GUINIVERE KOTTER (Mrs. George)--Supervisor of Student Teachin
Associate Professor of Educati
B.S., Utah Agricultural College; M.A., Stanford University. One year gradua
study since 1926 at Stanford University, Teachers College of Columbia Unive
sity, University of Southern California, and University of California at L
Angeles. At San Diego State College since 1928.

BAIRD, OSCAR--------------------------------------------Professor of Physi
B.A., 1910, University of Wisconsin; M.A., 1924, University of Californi
Three years graduate study since 1924 at University of Minnesota, Universi
of California, University of Southern California, University of Oregon.
San Diego State College since 1921.

*BAKER, CLIFFORD HENRY, Jr.-------------Instructor in Spanish and Fren
B.A., 1933, San Diego State College; M.A., 1935, University of California. Tv
years graduate study since 1935 at University of California. At San Dieg
State College since 1937.

BARNHART, KENNETH EDWIN--------------Associate Professor of Sociolo
A.B., 1915, Southwestern University; A.M., 1920; Southern Methodist Un
versity; Ph.D., 1924, University of Chicago. At San Diego State College sin
1939.

*BENNETT, MURIEL--------------------------Instructor in Physical Educati
B.A., Pomona College; M.A., Claremont Colleges. One-half year gradua
study since 1936 at Claremont Colleges and University of California at L
Angeles. At San Diego State College since 1936.

BLAKE, DEAN--------------------------------------Instructor in Meteorolo
Meteorologist, U. S. Weather Bureau. At San Diego State College since 192

†BROMLEY, J. PHILIP-------------------------Assistant Professor of Commer
B.S., 1934, M.S., 1936, University of Southern California. One year gradua
study since 1936 at University of Southern California, Columbia Universit
and Texas Agricultural and Mechanical College. At San Diego State Colle
since 1936.

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† On military leave
* On leave

OOKS, BAYLOR………Assistant Professor of Geology

B.A., 1928, Stanford University. Two years graduate study since 1928 at University of Arizona and Stanford University. At San Diego State College since 1931.

OWN, ELIZABETH (Mrs. Leslie P.)………Associate Professor of French

Ph.B., M.A., Ph.D., University of Chicago. At San Diego State College since 1926.

OWN, LESLIE PARKER………Professor of Spanish and French

B.A., 1912, Yale College; M.A., 1913, Harvard University; Ph.D., 1935, University of Southern California. At San Diego State College since 1922.

ALLAND, LEO BLAKELY………Associate Professor of Physical Education

B.A., 1923, University of Southern California; M.S., 1931, University of Idaho. One year graduate study since 1931 at University of Southern California. At San Diego State College since 1935.

MERON, ROY ERNEST………Professor of Economics

A.B., 1922, Ph.D., 1929, University of California. At San Diego State College since 1929.

RBETT, KATHERINE E.………Supervisor of Student Teaching;
Associate Professor of Education

B.Pd., Michigan State College; B.S., M.A., Teachers' College, Columbia University. At San Diego State College since 1921.

OUCH, JAMES ENSIGN………Professor of Biology

B.S., 1930, M.S., 1931, Cornell University; Ph.D., 1939, University of Southern California. At San Diego State College since 1932.

ARSIE, MARVIN LLOYD, Jr.………Instructor in Biology

A.B., 1934, University of California at Los Angeles; Ph.D., 1939, Stanford University. At San Diego State College since 1939.

EPUTY, ERBY CHESTER………Professor of Education

B.A., 1922, University of Denver; M.A., 1926, Ph.D., 1929, Columbia University. At San Diego State College since 1931.

ICKHAUT, FLORENCE LILLIAN SMITH (Mrs. Charles A.)
Professor of English

B.A., Northwestern University; M.A., University of Chicago. At San Diego State College since 1917.

DUSTIN, GERTRUDE LORRAINE………Instructor in Psychology and
Home Economics

B.S., Teachers College, Columbia University; M.S., University of Southern California. At San Diego Junior College since 1941.

UBANK, JOHN F.………Assistant Professor of Physical Education

B.S., 1933, M.S., 1937, Ed.B., 1937, EdM., 1939, State College of Washington. At San Diego State College since 1942.

LEASON, JOHN MORTIMER………Assistant Professor of Mathematics

B.A., 1929, University of California at Los Angeles; M.A., 1930, University of California. One and a half years graduate study since 1930 at University of Southern California, University of California at Los Angeles and Claremont Colleges. At San Diego State College since 1930.

AMANN, ILSE HEDWIG………Assistant Professor of Art

B.E., University of California at Los Angeles. M.A., Columbia University. At San Diego State College since 1934.

AMMACK, EDITH CHASTAIN………Supervisor of Student Teaching
Associate Professor of Education

B.A., San Jose State College. At San Diego State College since 1911.

AMMACK, ISABELLA STEWARD………Supervisor of Student Teaching;
Assistant Professor of Education

B.A., M.A., University of California. One-half year graduate study since 1929 at University of California. At San Diego State College since 1936.

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On military leave
Junior college

HARVEY, DOROTHY R. (Mrs. F. A.)-------------Assistant Professor of Bota

B.A., San Diego State College; M.A., University of Southern California. O
year graduate study since 1928 at University of Southern California and U
versity of Chicago. At San Diego State College since 1924.

HARWOOD, ROBERT DANIEL--------------------------Professor of Zoolo

A.B., 1920, Pomona College; Ph.D., 1928, Cornell University. At San Die
State College since 1928.

*HOUSER, LOWELL D.-----------------------------------Instructor in A

Diploma, 1924, Chicago Art Institute. Five years' special study since 19
in Mexico, Yucatan, Haiti, and New York City. At San Diego State Colle
since 1938.

HUFF, GEORGE D.------------------Associate Professor of Health and Hygie

M.D., 1924, University of Texas. At San Diego State College since 1939.

HUNT, MARGARET B. (Mrs. E. J.)----------Supervisor of Student Teachin
Instructor in Mu

B.S., M.A., Teachers College, Columbia University. One-half year gradua
study since 1935 at Teachers College, Columbia University, and Michigan Sta
College. At San Diego State College since 1940.

JACKSON, EVERETT GEE----------------------------------Professor of A

B.A., 1930, San Diego State College. Three years special study in Mexi
M.A., 1939, University of Southern California. At San Diego State Colle
since 1930.

JOHNSON, FRANK LOUIS----------------------Assistant Professor in Engli

B.A., 1928, M.A., 1929, University of Minnesota; Ph.D., 1934, University
Wisconsin. At San Diego State College since 1939.

JOHNSON, MYRTLE-----------------------------------Professor of Biolo

B.S., M.S., Ph.D., University of California. At San Diego State Colle
since 1921.

JONES, SYBIL ELIZA---------------------Assistant Professor of Speech A

B.L., M.L., University of California. Two years special study since 19
At San Diego State College since 1925.

†JORDAN, HARRY JOHN-----------------------------Professor of Commer

B.A., 1926, Washburn College; M.B.A., 1930, Harvard School of Busine
Administration; Ph.D., 1936, Northwestern University. At San Diego Sta
College since 1939.

KEENEY, JOSEPH SUMNER-------------------Associate Professor of Engli

B.A., 1921, Yale College; M.A., 1928, Ph.D., 1933, University of California.
San Diego State College since 1933.

KELLY, GENEVIEVE------------------------Assistant Professor of Sociolo

B.A., University of California; M. A., Columbia University. At San Die
State College since 1924.

KENNEDY, CHESTER BARRETT---------------Assistant Professor of Engli

B.A., 1927, Chico State College; M.A., 1939, Stanford University. Two a
one-half years graduate study since 1928 at Stanford University and the U
versity of California. At San Diego State College since 1937.

LEIB, JULIUS-----------------------------------Asisstant Professor of Mus

Three years special study at Leipzig Conservatory. At San Diego State C
lege since 1938.

LEONARD, CHARLES B.--------------------------------Professor of Histo

B.A., 1921, M.A., 1922, Ph.D., 1929, University of California. At San Die
State College since 1921.

*LESLEY, LEWIS B.-----------------------------------Professor of Histo

B.A., 1920, Stanford University; M.A., 1923, Ph.D., 1933, University
California. At San Diego State College since 1924.

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† On military leave
* On leave

**LIVINGSTON, GEORGE ROBERT**--------------------Professor of Mathematics

B.S., 1910, M.A., 1922, University of California. One year graduate study since 1922 at University of California and University of California at Los Angeles. At San Diego State College since 1921.

†**LUCIO, WILLIAM HOWARD**-----------------Supervisor of Student Teaching; Assistant Professor of Education

A.B., 1934, M.A., 1937, University of California. Three years graduate study since 1934 at University of California. At San Diego State College since 1939.

**MADDEN, RICHARD**------------------Principal of Campus Elementary School; Professor of Education

B.A., 1926, Nebraska (Peru) State Teachers College; M.A., 1930, Ph.D., 1931, Columbia University. At San Diego State College since 1939.

*__MEAD, HUNTER__---------------Assistant Professor of Philosophy and Psychology

B.A., 1930, Pomona College; M.A., 1933, Claremont Colleges; Ph.D., 1936, University of Southern California. At San Diego State College since 1941.

**MENDENHALL, MARY**------Dean of Women; Professor of Educational Guidance

B.A., University of Colorado; M.A., University of Southern California; Ph.D., Yale University. At San Diego State College since 1939.

**MESSNER, ELMER ALLEN**--------------------Assistant Professor of Chemistry

B.A., 1927, M.A., 1928, Stanford University. Two years graduate study since 1928 at Technische Hochschule, Breslau, Germany. At San Diego State College since 1931.

†**MOE, CHESNEY R.**--------------------------------Associate Professor of Physics

B.A., 1929, M.A., 1931, Stanford University; Ph.D., 1941, University of Southern California. At San Diego State College since 1931.

**NASATIR, ABRAHAM PHINEAS**-------------------------Professor of History

B.A., 1921, M.A., 1922, Ph.D., 1926, University of California. At San Diego State College since 1928.

*__NICHOLS, AMBROSE R., Jr.__---------------------------Instructor in Chemistry

B.S., 1935, University of California; Ph.D., 1939, University of Wisconsin. At San Diego State College since 1939.

**NORDAHL, MARGUERITE ANNA**--------------Supervisor of Student Teaching; Assistant Professor of Education

B.A., San Diego State College; M.A., Claremont Colleges. At San Diego State College since 1936.

†**OSBORN, CLARENCE G.**-----Associate Professor of History and Political Science

B.A., 1926, M.A., 1927, Ph.D., 1935, Stanford University. At San Diego State College since 1937.

**PATTERSON, LENA E.**-----------------------------------------Professor of Art

A.B., B.S., Ohio University. M.A., Columbia University. One year graduate study since 1918 in Berlin, Vienna, Paris, London. At San Diego State College since 1933.

†**PEASE, ESTHER ELIZABETH**--------Assistant Professor of Physical Education

B.A., University of California at Los Angeles. One year graduate study at University of California at Los Angeles, University of Southern California, and Mills College and one year European study in the dance since 1931. At San Diego State College since 1939.

†**PEIFFER, HERBERT C., Jr.**-----------Instructor in Psychology and Speech Arts

A.B., 1928, University of California at Los Angeles; M.A., 1931, Ph.D., 1939, Stanford University. Appointed Junior College 1937. At San Diego State College since 1941.

**PERRY, FAY V. (Mrs. J. M.)**--------Director of Guidance for Two-Year Students; Assistant Professor of Sociology

B.A., San Diego State College; M.A., University of Southern California. Two years graduate study since 1931 at University of Southern California and Stanford University. Appointed Junior College 1936. At San Diego State College since 1940.

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† On military leave
* On leave

PETERSON, ARTHUR G.____________Dean of Liberal Arts; Professor of Economics

B.A., 1912, College of the Pacific; M.A., 1926, Stanford University. Two years graduate study since 1926 at Stanford University, University of Washington, and University of Southern California. At San Diego State College since 1921.

PETERSON, CHARLES E.__________Dean of Men; Professor of Physical Education

A.B., 1928, San Diego State College; M.A., 1937, Claremont Colleges. At San Diego State College since 1921.

†PFAFF, PAUL LEWIS_____________________Associate Professor of Speech Arts

B.A., 1929, Stanford University; M.A., 1937, University of Southern California. Two years study since 1937 at University of Southern California. At San Diego State College since 1931.

PHILLIPS, WALTER THOMAS_______Associate Professor of Spanish and French

B.A., 1925, University of Washington; M.A., 1926, Stanford University. Graduate study at Institute of French Education, National University of Mexico; Ph.D., 1943, University of Southern California. At San Diego State College since 1927.

POST, LAUREN CHESTER___________________Associate Professor of Geography

A.B., 1924, M.A., 1931, Ph.D., 1937, University of California. At San Diego State College since 1937.

REDIT, EDITH ESTHER______________________Supervisor of Student Teaching; Assistant Professor of Education

B.A., M.A., University of California. At San Diego State College since 1938.

*RICHARDSON, ROBERT WILLIAM_________Assistant Professor of Geography

B.A., 1930, University of California. Three years graduate study since 1930 at University of California. At San Diego State College since 1939.

†ROBINSON, DUDLEY HUGH_________________________Professor of Chemistry

B.A., 1927, Louisiana State University; M.S., 1932, University of Iowa; Ph.D., 1942, University of Southern California. At San Diego State College since 1928.

ROGERS, SPENCER LEE_______________________Director of Extension Service; Associate Professor of Anthropology

B.A., 1927, San Diego State College; M.A., 1930, Claremont Colleges; Ph.D., 1937, University of Southern California. At San Diego State College since 1930.

ROSS, MELVYN K.__________________________Instructor in Physics and Chemistry

A.B., 1939, San Diego State College; M.S., 1942, University of Southern California. At San Diego State College since 1942 (Laboratory Assistant 1939-1942).

SCHWOB, MARION LYON (Mrs. W. E.)_________________Associate Professor of Physical Education

B.A., University of Iowa; M.S., University of Southern California. At San Diego State College since 1934.

SHAFER, FLORENCE I._______________Assistant Professor of Physical Education

B.A., University of California; M.S., University of Southern California. At San Diego State College since 1933.

†SMITH, CHARLES ROBERTS_________Assistant Professor of Physical Education

B.A., 1931, San Diego State College. One year graduate study since 1931 at University of Southern California. At San Diego State College since 1933.

†SMITH, CLIFFORD EDWARD______________Associate Professor of Astronomy

B.A., 1923, Carleton College; M.A., 1926, Swarthmore College; Ph.D., 1936, University of California. At San Diego State College since 1937.

*SMITH, DEANE FRANKLIN____________________Assistant Professor of Music

B.Mus., 1931, M.Mus., 1939, Northwestern University. At San Diego State College since 1939.

SMITH, LEILA DEBORAH___________________________________Professor of Music

A.B., Oberlin College; M.Mus., Oberlin Conservatory; M.A., Columbia University. One-half year study since 1926 at Stanford University and Northwestern University. At San Diego State College since 1922.

---

† On military leave
* On leave

OULÉ, ELINOR--------------Supervisor of Student Teaching; Instructor in Art

B.A., San Diego State College; M.A., Teachers College, Columbia University. At San Diego State College since 1940.

PRINGSTON, CHRISTINE----------------------Associate Professor of Music

B.A., B.M., University of Redlands; M.A., University of Washington. Diplomée d'execution, Conservatoire Americain, Fontainebleau, France. At San Diego State College since 1930.

TEINMETZ, HARRY CHARLES-------------Associate Professor of Psychology

B.A., 1924, M.A., 1927, University of California. Two years graduate study since 1927 at Stanford University, University of California, and Purdue University. At San Diego State College since 1930.

TONE, BERENICE IRENE------------Medical Examiner; Associate Professor of Health and Hygiene

B.S., M.D., University of Wisconsin. At San Diego State College since 1936.

TONE, JOHN PAUL-----Head Librarian; Associate Professor of Library Science

B.S., 1926, Northwest Missouri State Teachers College; B.S., 1929, M.S., 1930, University of Illinois. Three years graduate study since 1926 at University of Chicago and University of Illinois. At San Diego State College since 1930.

TORM, ALVENA (Mrs. Eugene)--------------Associate Professor of Geography

A.B., A.M., University of California. At San Diego State College since 1926.

SWANSON, CHARLES EDMUND----------Instructor in English (Journalism)

B.A., 1941, San Diego State College. At San Diego State College since 1938.

RAIL, MABEL COY----------------------------Assistant Professor of English

B.A., Parsons College; M.A., State University of Iowa. Two years graduate study since 1927 at University of Southern California. Appointed Junior College 1935. At San Diego State College since 1940.

VALKER, HILDE KRAMER (Mrs.)-------------Assistant Professor of German

B.A., M.A., Northwestern University. At San Diego State College since 1931.

VALLING, CURTIS R.--------Assistant Professor of Mathematics and Engineering

B.A., 1925, E.E., 1926, Stanford University. One and a half years graduate study since 1926 at Stanford University and University of Southern California. At San Diego State College since 1931.

WALTON, LEWIS FLETCHER---------------------Instructor in Mathematics

B.S., 1929, M.S., 1931, Emory University; Ph.D., 1940, University of California. At San Diego State College since 1939.

VATENPAUGH, FRANK M.------------------Assistant Professor of Commerce

A.B., 1916, Pomona College, M.A., 1931, University of Southern California. Two years graduate study since 1931 at University of Southern California and University of Oregon. Appointed Junior College 1935. At San Diego State College since 1940.

VATSON, DONALD R.*------------------Assistant Professor of Physical Science Acting Registrar and Director of Student Personnel

B.A., 1924, B.S., 1925, M.A., 1927, Ed.D., 1940, University of Southern California. At San Diego State College since 1939.

WRIGHT, WILLIAM H.----------------------Associate Professor of Commerce

B.S., 1917, M.A., 1928, University of California, Ph.D., 1943, University of Southern California. At San Diego State College since 1921.

†WURFEL, SEYMOUR WALTER----------------------------Instructor in Law

B.A., 1927, Pomona College; LL.B., 1930, Harvard University. At San Diego State College since 1938.

†YOUNG, CARL HAVEN--------------Assistant Professor of Physical Education

B.A., 1925, Pomona College; M.A., 1935, University of Southern California. Two years graduate study since 1935 at Stanford University. At San Diego State College since 1939.

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† On military leave
* On leave

# SAN DIEGO JUNIOR COLLEGE FACULTY

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| Hepner, Walter R. | Princip |
| Watson, Donald R. | Chairma |
| Dustin, Gertrude Lorraine | Counseling, Psychology and Home Economi |
| †Greer, Thomas H. | Social Scien |

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John Carroll, Ph.D.
Viola Erlanger, M.D.
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Geo. D. Huff, M.D.
Irene Manning, B.S.
James A. May, M.D.
H. G. Merrill, M.D.
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R. H. Sundberg, M.D.
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## MEDICAL STAFF

| | |
|---|---|
| †O. S. Harbaugh, M.D. | Medical Examiner for Me |
| Richard Peck, M.D. | Acting Medical Examiner for Me |
| Berenice I. Stone, M.D. | Medical Examiner for Women and Campus Elementary Schoo |
| Marilynn M. Fenwick, R.N. | Nurs |

## LIBRARY STAFF

| | |
|---|---|
| John Paul Stone, M.S. in Library Science | Head Librarian |
| *Margaret Helen Demcray, A.B. and Certificate in Librarianship | Senior Librarian |
| Lulu Germann, B.S. | Senior Librarian |
| Anita M. Gillett | Typist-Clerk |
| Nettie L. Hagar | Secretary to Librarian |
| Geraldine K. Haynes, A.B., B.S. | Senior Librarian |
| Genevieve Kelly, A.M. | Senior Librarian |
| Elsie L. Roy, A.B. | Senior Librarian |
| Harriet B. Stovall | Senior Librarian in Charge of Campus Elementary School Library |
| † Winifred Smith | Library Clerk |

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* On leave.
† On leave for military service.

## ADMINISTRATIVE OFFICE STAFF

| | |
|---|---|
| Marion L. Campbell, M.A. | Assistant Registrar |
| Stella Louise Diboll, A.B. | Recorder |
| Faye Gunnell | Secretary to Employment-Placement Office |
| †Timothy Hallahan, A.B. | Property Clerk |
| Genevieve M. Hamblen | Secretary to the Registrar |
| Billie B. Holden | Secretary to Dean of Education and Dean of Liberal Arts |
| Constance King, B.S. | Secretary to Dean of Women |
| Fay Landweer, A.B. | Secretary to Dean of Men and Director of Extension |
| Helen M. Norris | Secretary to Two-year and Junior College Offices |
| D. G. Parker | Senior Account Clerk |
| †Katherine M. Pyle, A.B. | Assistant to the Comptroller |
| †Mildred Ann Robertson, A.B. | Secretary to Employment-Placement Office |
| Florence Schneider | PBX Operator and Receptionist |
| Frank M. Watenpaugh, M.A. | Comptroller |
| Florence Wiggins | Secretary of the Campus Elementary School |

## MAINTENANCE STAFF

| | |
|---|---|
| C. L. Fisk | Supervisor of Buildings and Grounds |
| William Duns | Head Gardener |
| Myrlen Southworth | Engineer |

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† On military leave.

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# SAN DIEGO STATE COLLEGE

BULLETIN

## *Circular of Information*

## ANNOUNCEMENT OF COURSES

THE GREAT SEAL OF THE STATE OF CALIFORNIA
EUREKA

FOR THE YEAR 1946-1947

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| Joel A. Burkman | Assistant Director of Education |

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| Social Science | Clarence G. Osborn |

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| Foreign Language | Walter T. Phillips |
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| Music | L. Deborah Smith |
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| Social Economics | Roy E. Cameron |
| Speech Arts | Paul L. Pfaff |

# BULLETIN AND ANNOUNCEMENT OF COURSES

VOLUME 33
JUNE, 1946

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SAN DIEGO, CALIFORNIA

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## 1946

### JULY

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## 1947

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# CALENDAR 1946-47

## SUMMER SESSION, 1946

Term I, June 24-August 2
Term II-A, August 5-23
Term II-B, August 5-September 6

## FALL SEMESTER, 1946-47

| | |
|---|---|
| ugust 12 | Applications for admission must be filed on or before this date. |
| ugust 15-16 | Qualifying Examinations for all entering freshmen who have not previously taken these examinations. No freshmen will be granted admission until these examinations have been taken. Out-of-town students may arrange to take tests during the first week of school. |
| eptember 12 | First Day of Orientation Program. All entering freshmen must appear on the campus at 8.30 a.m. and remain until 3.00 p.m. |
| eptember 13 | Second Day of Orientation Program. All entering freshmen must appear on campus at 8.30 a.m. and remain until 3.00 p.m. |
| eptember 13 | 8.30 A.M.—12.00 M. Fundamentals Tests—Required for admission to Teacher Education. Should be taken at the end of the first semester of the freshman year when possible.<br>1.00—2.30 P.M. College Aptitude Test for students entering with advanced standing. |
| eptember 16-17 | Registration and payment of fees. |
| eptember 18 | Instruction begins. Late registration fee becomes effective. |
| ovember 28-29 | Thanksgiving recess. |
| ecember 20 | Last day before Christmas recess begins. |
| anuary 6 | Classwork resumes. |
| anuary 23-29 | Semester examinations. |

## SPRING SEMESTER, 1946-47

| | |
|---|---|
| anuary 6 | Applications for admission must be filed on or before this date. |
| ebruary 3 | First Day of the Orientation Program. All entering freshmen must appear on the campus at 8.30 a.m. and remain until 3.00 p.m. |
| ebruary 4 | Second Day of the Orientation Program. All entering freshmen must appear on campus at 8.30 a.m. and remain until 3.00 p.m. |
| ebruary 3 | 8.30 A.M.—12.00 M. Fundamentals Tests—Required for admission to Teacher Education. Should be taken at the end of the first semester of the freshman year when possible.<br>1.00—2.30 P.M. College Aptitude Test for students entering with advanced standing. |
| ebruary 4, 5 | Registration and payment of fees. |
| ebruary 6 | Instruction begins. Late registration fee becomes effective. |
| arch 31-April 4 | Spring recess. |
| ay 30 | Memorial Day holiday. |
| une 5-12 | Semester examinations. |
| une 13 | Annual commencement. |

## SUMMER SESSION, 1947

Term I, June 23-August 1
Term II, August 4-22

# FUNCTIONS OF THE STATE COLLEGES OF CALIFORNIA

The State colleges have three major functions, namely: (1) To help the individual student to develop a well-rounded and adjusted personality; (2) to promote civic intelligence and competence; and (3) to create supplies of trained men and women, some to serve as teachers in the elementary and secondary schools, some to fill intermediate places of leadership, and some to transfer to graduate institutions to equip themselves to extend the frontiers of knowledge and to occupy the higher positions of leadership. In terms of publicly supported higher education, the State colleges and the university together make provision for the realization of all the essential objectives of higher education in our State.

To achieve their unique purposes the State colleges have developed and are improving offerings as follows:

1. Teacher education curricula for those students who plan to teach in the elementary school, the junior high school, and in secondary schools.
2. Preprofessional curricula.
3. Curricula of varying lengths in such fields as business, industry, governmental services, homemaking, and social service.
4. General education for students who take work which leads toward the bachelor of arts degree or to the higher professions through graduate work.
5. Guidance services to assist the individual student to plan his educational program and to make his college and life adjustments.
6. Extension courses in appropriate fields.

The State colleges accept the principle that higher education should be available to all capable high school graduates. The preservation and improvement of democracy depends upon the full and uphampered development of all potential citizenship and leadership resources. In keeping with this principle the State colleges maintain flexible entrance requirements. Each applicant is treated individually in terms of his potential capacity and his potential contribution and not in terms of past academic pattern or accomplishment alone.

The State colleges purposely maintain not only flexible entrance requirements, but also, adjustive curricula, and adequate and effective guidance and counseling services to promote the personal and educational development of worthy students. The State colleges modify traditional academic restrictions and provide new curricula and services whenever such modifications and additions seem to serve the legitimate desirable needs of individuals and society.

The promotion of civic intelligence and competence is the underlying aim of all activities on State college campuses. Special emphasis centers on warm personal relationships between instructors and students, on friendly counsel in time of need, and on the day-to-day routine of living in a friendly atmosphere. Because the majority of State college students live at home, it is possible to link together the college, the home, and the community in realistic democratic relationships.

The democratic controls exercised over the State colleges make them readily and effectively responsive to individual and community needs and encourage them continuously to make significant improvements in both curriculum and personal services. The State colleges are thus laboratories in which the facts and theories developed in research, in community living, and in daily association with students are reflected in the instructional program.

The State colleges plan their program of higher education so as to provide educational services inherent in the principle of equality of opportunity.

# THE COLLEGE

## LOCATION AND ENVIRONMENT

Renowned as a winter resort with a mild but invigorating climate, San Diego as become equally famous for its cool summers. High cultural standards in art, usic, literature, and science create a stimulating environment for a college. Many f these advantages are to be found in the heritage resulting from the expositions of 915-16 and 1935-36, including the buildings themselves, which portray the best types f Spanish colonial art and architecture. Housed in these buildings are the Fine Arts allery, exhibits in anthropology, natural history, and American archaeology, which re in many respects unsurpassed. The outdoor organ, the Ford Bowl, and the hortiultural gardens make Balboa Park, in which all these facilities are located, world enowned. The Scripps Institute of Oceanography, operated by the University of alifornia at La Jolla, gives opportunity for important cooperation in the biological iences.

## BUILDINGS AND EQUIPMENT

On February 1, 1931, the college was moved to the new campus, located one mile orth of the city's principal east-west boulevard, El Cajon Boulevard. The buildings re of Spanish-Moorish architecture which is well suited to the landscape and climate f this region. They include the Academic Building (which houses lecture halls, lassrooms and administrative offices); the Science Building; the Library; the Little heater; the Music Building; the Campus Elementary School; Scripps Cottage a social clubhouse for women students); the Cafe and Book Store; and the Physical ducation Building (a structure with adequate facilities for both men and women). he gymnasium contains a very fine basketball floor with stands that will accomodate 1,500 spectators. A fine concrete stadium, constructed in a natural site, has seating capacity that is adequate for present needs. The open air theater, seating ,200 persons, serves as a meeting place for large groups.

## FACILITIES FOR THE EDUCATION OF TEACHERS

The college maintains a modern elementary school on the campus where it has eveloped an extensive program for the education of elementary school teachers. he classroom-laboratory plan which calls for the use of work-rooms, the library, nd shops, affords unusual opportunities for the induction of students into teaching. y arrangement with the San Diego City Schools, directed teaching is provided in he Euclid Elementary School for one-half day throughout a semester. A similar rrangement exists at the Woodrow Wilson Junior High School for students who re preparing to teach junior high and special secondary school subjects. Students reparing to teach special and general secondary school subjects may be assigned to ne of the senior high schools.

## THE FACULTY

The professional education of the faculty places the college in the 97 percentile osition among teacher education institutions of the Country. For listing and urther details see the Directory on page 118.

## THE LIBRARY

The library facilities of this college are noteworthy for an institution of its size. he library consists of well over 95,000 volumes selected to meet the requirements f a modern educational institution. Six professionally trained librarians are available to render assistance to students in their reading and reference work.

For the duration of the war the library service has been further augmented by the oan of a librarian and three special libraries, namely, a collection of 3,000 volumes n anthropology and ethnology from the San Diego Museum of Man, the U. S. rant Memorial Library of 1,375 volumes, and the 25,000 volume Scientific Library f the San Diego Society of Natural History.

The Campus Elementary School Library, representing a collection of 11,000 olumes, possesses equipment and building facilities that are unique.

## LIVING ACCOMMODATIONS

Living arrangements for students whose homes are not in San Diego or withi commuting distance are made through the offices of the Dean of Women or the Dean o Men. All women students are urged to live in the residence hall adjoining the campu Careful consideration is given to study conditions, healthful living, and adequate socia opportunities. Room and board may be secured for approximately $200 per semeste payable in four installments. Opportunities to reduce this figure by working a fe hours each week are occasionally available. Reservations should be made in advanc through the Manager of Quetzal Hall, 5192 College Avenue, San Diego 5, California Where students find other accommodations more desirable, written permission fro parents must be secured and filed with the Dean of Women or Dean of Men.

## VETERANS' EDUCATION AND HOUSING

The college has been approved by various accrediting agencies to offer courses fo veterans leading toward the A.B. Degree in some 19 major fields. A veterans' office i maintained on the campus to facilitate registration, aid in the establishment of benefits and serve as an information center. Through a faculty committee on veterans' affairs special counseling services are available.

The Federal Housing Authority has made available housing for 600 single mal veterans at Riverlawn, located midway between Old Town and Loma Portal. Fo further details write to the Veterans' Secretary at the college.

## STUDENT LIFE

A rich field of extra-curricular activities is available to the student throughout hi college life. The student is urged to select these activities carefully in order that h may profit by these extra-class experiences without lowering his standards of scholarship. The *Student Handbook*, available at the time of registration, gives informatio concerning activities which include organizations in every department of the college and opportunities for individual and group experience in the social, athletic, fraternal religious and governmental life of the campus.

## STUDENT HEALTH SERVICE

The Health Department is maintained for the protection and care of studen health. A complete physical examination is required of each student upon admission t college. Careful attention is given to cases undergoing remedial treatment or to case in which a modification of study load or in the amount of participation in physica activities seem advisable.

A representative of the Health Department is available each day for consultatio and emergency treatment. Students who have been absent because of illness shoul receive clearance from the Health Department before returning to classes.

A group plan for accident insurance is in operation for students who desire t participate.

## PLACEMENT SERVICE

A Placement Office is maintained by the college, which serves as a clearing hous for part-time and full-time jobs. Employers notify this office of available openings in their organizations, and also turn to the office for information concerning graduates o nongraduates whom they are considering for employment.

Included in the service of the office are the listing of part-time jobs of all types available, including opportunities to work for board and room, teacher placement, and full-time jobs in commerce and industry.

This service is free to students, who are invited to arrange for interviews with members of the placement staff if in need of assistance in finding work. Students who know of jobs in which they are not themselves interested are encouraged to notify the office of such vacancies.

The Placement Secretary should be seen or called regarding vacancies or work applications.

## VOCATIONAL REHABILITATION SERVICE

The Bureau of Vocational Rehabilitation, California State Department of Education, offers its service to students who have an employment handicap resulting from physical disability of any kind. Included are vocational counseling, the payment of tuition and fee, and the providing of textbooks without charge to the trainee. Details of the service may be obtained from the Registrar's Office.

# ADMISSION AND REGISTRATION

## GENERAL ADMISSION REQUIREMENTS

High school graduates and other applicants possessing equivalent preparation may be admitted to this college upon evidence of fitness to profit by college instruction, such fitness to be shown by previous scholastic records, by evidence of good moral character and personal qualifications, and by satisfactory scores on tests which the college may require. Due to crowded conditions the college probably will have to refuse all qualified applicants who do not file application blanks and official transcripts prior to the dates indicated in the Calendar on page 5.

## ADMISSION OF HIGH SCHOOL GRADUATES

(1) A high school transcript must be presented showing satisfactory scholarship, and (2) applicants must demonstrate readiness for college instruction by making satisfactory scores on such tests as the college may designate.

**Regular status** will be granted if the student has earned A or B grades in not less than 16 semester courses in English, Social Sciences, Foreign Language, Mathematics, Natural Sciences, and related fields, during the tenth, eleventh, and twelfth grades.

**Regular-provisional status** will be granted if the student has earned A or B grades in not less than 12 semester courses in the above subjects. The student will attain full regular status at the end of the first semester in college if a scholarship average of C or better is maintained in at least 12 units of work. Failure to secure a .75 average will disqualify the student for further attendance.

**Provisional status** will be granted students who do not qualify for regular-provisional status if they have earned A or B grades in at least 12 semester courses of any type during the tenth, eleventh, and twelfth grades. These students will be enrolled in two-year curricula. Individuals who fall slightly below the above standard may be admitted to the two-year curricula if qualifying examination scores indicate probable success in these courses.

**Adult special status** may be granted an applicant who is over 21 years of age or is a war veteran provided that he demonstrates through qualifying examinations satisfactory ability to do college work. Such students may be transferred to regular status after completion of one year of satisfactory work and receive full credit for all work completed.

## ADMISSION BY EXAMINATION

Certificates of successful examination before the College Entrance Examination Board will be accepted when candidates cannot meet the above scholarship requirements.

## ADMISSION OF NON-HIGH SCHOOL GRADUATES

A high school diploma is not required for admission as an adult special student but if a non-high school graduate is so admitted he may be required to complete, in addition to the usual requirements for the A.B. Degree, three semester units of college work for each two semester courses which he lacked for high school graduation.

## ADMISSION OF VETERANS

Applicants who are veterans may be enrolled in any of the above classifications. Lack of a high school diploma will not prevent admission of a veteran provided he can demonstrate through the examinations of the college or of the United States Armed Forces Institute that he is capable of doing satisfactory college work. The college cooperates with the local high schools by helping plan correspondence study for a veteran which can lead to the issuance of a diploma by the high school.

## SPECIAL STUDENTS

Persons over 21 years of age may be admitted on the basis of maturity, provided they present satisfactory evidence of good character and intelligence. Full matriculation will be granted only upon removal of all entrance deficiencies, and the completion of a full semester of satisfactory college work.

### Auditors

Properly qualified persons may apply for admission to attend classes as auditor Such students pay the same fees as those who take equivalent work for credit.

### Admission With Advanced Standing

Credit earned in recognized institutions of collegiate grade will be evaluated an advanced standing allowed accordingly toward the graduation requirements of th institution. Applicants must show an average grade of C or better for all colleg work, for the last college attended, and for the last semester of attendance in order t qualify for regular status. A student who enters with advanced standing is one wh has completed at least 15 units of passing work in another collegiate institution. However, no applicant may disregard his collegiate record and apply for admission onl on the basis of his high school work. Not more than 64 semester hours of junior colleg work may be allowed for credit.

Students seeking admission with advanced standing must furnish complete transcripts for all work attempted beyond the eighth grade. A $2 evaluation deposit mus accompany the application for admission provided the student has completed 30 unit or more work. This deposit will be refunded if the student enrolls at the next regula registration period.

## REGISTRATION

Registration date for new students for the fall semester of 1946-47 is Septembe 16th and for the spring semester it is February 4th. An application blank should b secured from the Registrar and filed, with complete transcripts of record, at least tw weeks prior to registration date.

The college year is divided into fall and spring semesters of 18 weeks each, followed by a summer session consisting of two terms of six weeks and three weeks respectively. Students may enter at the beginning of either semester or either term of the summer session.

The summer session meets the needs of students who wish to secure supplemental credit or to shorten the time for completion of their college course, and of teachers in service.

## TESTS REQUIRED AT REGISTRATION TIME AND LATER

1. A physical examination is required of all students upon entering the college. Appointments for this examination are made during the orientation program.

2. All entering students are required to take a College Aptitude Test. Exceptions may be made for graduate students and for those who register for five units or less.

3. All college transfer students who present less than a minimum of 15 units of college credit must take a high school achievement examination, and a standard English examination in addition to the College Aptitude Test. Students whose tests indicate that they are not qualified for the regular English 1B must take English 1A or 1AA. Exceptions may be made for students transferring English credit from other colleges.

4. Passing the Fundamentals Test in reading, spelling, arithmetic and handwriting, and a Speech Test, are prerequisites for admission to upper division courses in teacher education curricula. These tests should be taken at the beginning of the second semester of the freshman year, in order that deficiencies, if any, may be made up before applying for admission to the upper division of teacher education curricula. Exceptions may be made for graduates of California State teacher education institutions who have been teachers in service.

## LATE REGISTRATION

Students who register after the first week of the semester are subject to a limitation of program and must secure the approval of instructors for late admission to classes. After registration day a fee of $1 is charged for late registration.

## CHANGES IN REGISTRATION

Petitions for changes in program may be secured at the Registrar's office. A small fee is charged for changes in program after registration books are filed.

## LOANS AND SCHOLARSHIPS

Scholarships for both men and women have been made available through the efforts of alumni, patrons of the college, and civic organizations. Superiority in scholarship and worthiness from the point of view of need are the standards upon which selection is based. Scholarship aid is therefore restricted for the most part to students who have completed the lower division of the college.

Both long and short term loans are available to students who have been in attendance for at least one year and who have given evidence of ability to do satisfactory college work. Application for loans is made to the Committee on Loans and Scholarships through the office of the Dean of Men or Dean of Women.

# FEES AND EXPENSES

## PROBABLE EXPENSES FOR ONE SEMESTER

An estimate of the expense of attendance for one semester is given below. estimate is made as to the cost of clothing, or other personal items, since these figur vary with the demands of the individual. Laboratory fees are additional.

### A Partial Estimate of Expenses

One Semester

| | *Minimum* | *Maximu* |
|---|---|---|
| Fees and Deposits | $20.00 | $27.50 |
| Books | 12.00 | 25.00 |
| Board and Room | 200.00 | ---- |
| Transportation, Lunches, Incidentals | 15.00 | 50.00 |
| Miscellaneous | | 5.00 |

Before enrolling in college, the student should possess sufficient resources to me the minimum expenses for one semester. A limited amount of clerical work in offic and in the library may be offered from time to time, but ordinarily it is not sufficientl remunerative to reduce expenses materially.

## LIST OF FEES AND DEPOSITS (SUBJECT TO REVISION)

### Enrollment Fees and Deposits

(Payable at Time of Registration)

| | |
|---|---|
| By all students: | |
| Tuition (auditors pay same fees as other students): | |
| Regular students (carrying over 5 units) | $6.5 |
| Limited students (carrying 5 units or less) per unit | 2.5 |
| Materials and service: | |
| Regular students | 4.0 |
| Limited students per unit | .5 |
| General service deposit (unexpended portion is refunded) | 3.0 |
| Personnel examination (new students only)<br>(Limited students and graduate students exempted) | 2.0 |
| Student activity fees (not required by the State): | |
| Regular students | 6.0 |
| Limited students | 2.0 |

### Miscellaneous Fees and Deposits

(Fees Payable When Service Is Rendered)

| | |
|---|---|
| Change of program | $ .5 |
| College Bulletin (free to prospective students) | .3 |
| Duplicate library card | .2 |
| Duplicate registration book | .5 |
| Evaluation of transfer records for advanced standing | 2.0 |
| Fundamentals test | .5 |
| Late filing of registration book | 1.0 |
| Late registration | 1.0 |
| Transcript of record (1st copy free) | 1.0 |

### Graduation Fees

| | |
|---|---|
| State Teaching Credentials (each credential) | $3.00 |
| Diploma | 1.00 |

The credential fee is collected through the college by cashier's check or post office money order made payable to the State Department of Education.

# GENERAL REGULATIONS

## INFORMATION

All inquiries relative to the college should be directed to the Registrar's office.

## CLASSIFICATION

*Full-time students* are those who are registered in more than five units of work. They are expected to carry a minimum of 12 units unless excused.

*Limited students* are those who, for acceptable reasons, have been permitted to register for five or fewer units of work.

*Class.* Students who have completed 0 to 29 units of work are classified as freshmen; 30 to 59 units as sophomores; 60 to 89 units as juniors; and 90 or more as seniors.

## SCHOLARSHIP, GRADES, AND GRADE POINTS

The following grades are used in reporting the standing of students at the end of each semester: A, excellent; B, good; C, fair; D, passed; E, conditioned; F, failed; I, incomplete, and W, withdrawn.

The grade E is recorded for work which is of low order but which may be made passable. If the work is raised to passing level by the close of the next semester, the grade is changed to D; otherwise it is changed automatically to F.

The grade I is recorded for work of high order but which is incomplete for an acceptable reason. To change an I to another grade, the work must be completed within the next semester; otherwise it is changed to F.

Grade points are assigned as follows: Grade A, 3 points per unit; B, 2 points per unit; C, 1 point per unit; D, no points; E, minus 1 point per unit; F, minus 1 point per unit. The number of grade points a student has earned in a subject is determined by multiplying the number of points he has received by the number of units allowed. The grade point average is determined by dividing the grade points earned by the number of units attempted. Courses in which the student received an I or Cr. or W are disregarded in computing grade point averages. A student must earn at least a C average in all work undertaken at the college to qualify for a diploma or a transcript of record with recommendation to another collegiate institution. If a course is repeated only the second grade earned is considered in the student's average.

## UNITS OF WORK, AND STUDY LISTS LIMITS

A unit of credit represents one hour of lecture or recitation combined with two hours of preparation per week through one semester, or three hours of laboratory or field work in the case of laboratory credit.

Students are not ordinarily permitted to enroll for more than 16 units * for credit toward graduation. This constitutes a normal semester's program.

Certain exceptions to this rule exist. If during the preceding semester the student has carried at least 12 units *: (1) If a grade point average of at least 1.5 was earned, 17 units * may be carried for credit toward graduation; and (2) if a grade point average of 2.0 (B) was earned, 18 units * may be carried.

Any course in which a passing grade is earned may be used in satisfying pattern requirements, even though credit for the course is in excess of the units which may be credited for graduation.

Exceptions to the above regulations may be secured only through a petition to the Scholarship Committee.

No student may register for less than 12 units without the approval of the Dean of General Education or the Dean of Professional Education.

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* In addition to required physical education courses.

## PROBATION AND DISQUALIFICATION

### Probation

Any student whose scholarship record shows a cumulative deficit of 12 more grade points below a C average for all work undertaken in the college will placed on probation. A limited student will be placed on probation if his cumulati deficit below a C average equals or exceeds the average number of units carried p semester. Probationary status may be continued provided that the student does n add further toward his grade point deficiency.

### Disqualification

Any probational student whose scholarship falls below an average grade of in any single semester is disqualified for further attendance at the college. A schola ship record below a D average for any single semester also disqualifies a student.

A disqualified student may be reinstated after an interval of one semester f reasons satisfactory to the Executive Committee of the Faculty. All applications f reinstatement must be in writing.

## WITHDRAWALS FROM CLASS

Forms for withdrawal from class may be obtained at the Registrar's office. If student withdraws from class during the first seven weeks of a semester, a grade W will be recorded upon his permanent record for each class which he has droppe If he withdraws during the remainder of the semester, either an I or an F will b recorded unless a grade of W is approved by the instructor and the proper dean. grade of I automatically becomes an F unless the work is completed by the end the next semester of attendance.

## TRANSCRIPTS OF RECORD

Students may secure one transcript of record without fee. Thereafter, eac request for transcript should be accompanied by the fee of $1. Once a student ha matriculated in this college, transcripts from other schools will not be returned, o copies of them made. No fees are charged for transcripts required for militar purposes.

Transcripts in the possession of students are to be regarded as unofficial records

## ELIGIBILITY FOR DIRECTED TEACHING

No student shall be eligible for directed teaching (Education 116) who has no completed 75 units, been admitted to Teacher Education, and whose entire record as well as his record for the preceding semester, does not average at least a 1.2 grade

## THE HONORS GROUP

All students who at the end of the sophomore year have attained a grade-poin average of 2.5, and such others as have attained a high average in the department i which their major is selected, and who have received the recommendation of tha department and the consent of the Committee on Honors, may if they so elect, con stitute an honors group, for special treatment in their major subject.

Such students, so far as the facilities of the department and the best interests o the students under its charge allow, shall be treated as befits their individual need and as their individual capacities warrant. They shall be eligible to enroll i honors or special study courses, although credit in such courses shall be limited to units a semester. They shall not be held to regular attendance in the establishe courses of their departments if, in the opinion of the instructor, the course requirements can be met through special assignments and examinations or by satisfactory performance in the regular examinations in the course. With the consent of the major department, requirements concerning minors and specific courses or sequences in the major may be set aside. Each honor student shall be assigned to a member of his major department for advice and direction.

Students in the honors group who fail to take advantage of the opportunities there offered may at the end of any semester be transferred by the department to the general course. Students in the general course who show unusual capacity, upon recommendation of the department and the Committee on Honors, may at the end of any semester, be transferred to the honors group if such transfer appears practicable.

Students who wish to apply for entrance in the Honors Group may do so by filling out cards to be obtained from their major departments. The applications should be filed with the chairman of the major department not later than a week after registration opens. Units earned by students doing individual study under this plan will be recorded under the symbol 166 and will be subject to the formulated rules dealing with limitations of student load.

## THE DEGREE WITH HONORS AND WITH DISTINCTION

Upon recommendation of the Committee on Honors, graduation with honors shall be granted to the upper 10 per cent of the graduating class. Each department shall determine which students it will recommend for distinction in the major field at graduation, and report its recommendation to the Committee on Honors for transmission to the faculty.

## EXAMINATIONS

No final examinations shall be given to individual students before the regular time. Any student who finds it impossible to take a final examination on the date scheduled must make arrangements with the instructor to have an incomplete grade reported and must take the deferred final examination not later than the end of the first semester following that in which the incomplete was given. No exception shall be made to this rule without the approval of an academic dean and the instructor concerned.

All final examinations shall be written in official examination books or other forms which shall be furnished by the college and distributed by the instructor at the beginning of the examination period. No books or papers of any kind shall be brought into the examination room, except by special order of the instructor.

## EXTENSION COURSES

The amount of credit for extension and correspondence courses acceptable in fulfillment of the requirements for the Bachelor of Arts Degree will depend upon the nature of the courses, the quality of the work done, and the student's preparation for work in the field of the course. The college reserves the right to limit credit to such courses as have been approved, and the total of such acceptable credit to 12 units.

# THE BACHELOR OF ARTS DEGREE

## GENERAL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE I TEACHER EDUCATION AND IN LIBERAL ARTS

San Diego State College offers the following types of curricula leading to t A.B. Degree:

(1) the curricula leading to the California teaching credentials,
(2) the Liberal Arts curricula.

With slight variations in definition, many of the basic requirements are the same.

A minimum of 120 units of college work, representing a four-year course, required for the Bachelor of Arts Degree. At least 30 units must be earned in th college, and not less than 24 of these residence units must ordinarily be taken with t rank of senior. Not fewer than 12 units of this work must be completed during a sing semester; or in lieu of this at least 16 units must be completed in not less than tv consecutive summer sessions. At least a C average in scholarship must be maintain in the major and in all work applied toward the degree.

## CREDIT GRANTED FOR MILITARY SERVICE

Six units of lower division elective credit will be granted to students who ha served in the armed forces of this country upon the completion of the prescribed bas training program. Documentary evidence bearing the signature of the proper co manding officer must be filed before credit will be accorded to the student.

Additional units of credit will be granted to students who can document the fa that they have completed officer's or other specialized training, and have been assign to active military duty.

## SUBJECT MATTER REQUIREMENTS IN THE LOWER DIVISION

| | *Uni* |
|---|---|
| Physical Education | 2 |
| Health Education 1 or 2 | 2 |
| English | 6 |
| Psychology | 3 |
| Foreign Language (not required in the teacher education or general engineering curricula) | 10 |
| Mathematics A and B, 4 units, or high school algebra and geometry | 0–4 |
| Social Sciences | 12 |
| Natural Sciences | 12 |
| Electives to make total of 60 units, including lower division preparation for the major and minor. | |

### Explanation of Lower Division Requirements

### English

This requirement may be satisfied either in the freshman year or in the sophomor year. Courses are to be chosen from the following: English 1A, 1AA or 1B and 11, 1 13, 14, 15, 16, 50A, 50B, 52A, 52B, 56A, 56B.

### Psychology

Psychology 1A may be completed at any time in the lower division.

### Foreign Languages

At least 10 units in one foreign language are required in the lower division excep that no language is required in teacher education and engineering. No degree credi is given for only the beginning college semester of a foreign language.

High school work completed with grade of C or better may meet the foreig language requirement in whole or in part. Each year course is counted in satisfactio of 3 units of this requirement. Three years of foreign language in high school wil satisfy the college requirement in foreign language. If two or more years have elapse since the completion of a high school course in any foreign language the final year o the course may be repeated for college degree credit but not for additional credit in meeting the language requirement.

### Social Sciences

Twelve lower division units chosen from two or more departments in the Social Science Division are required.

High school semester courses not to exceed two such courses in the fields of history, political science, sociology, and economics taken with grades of B or better may be used in satisfying 3 units of the social science requirement provided they are taken in the senior year.

### Natural Sciences

Twelve lower division units chosen from courses representing each of the following groups are required:

(a) Biology 1 or a year course in high school or college biology, botany, physiology or zoology.
(b) Physical Science 1A or 1B or a year course in high school or college physics or chemistry.
(c) Lower division courses to meet the natural science requirement must be taken from the following lists and must include one of the college or high school laboratory courses marked with an asterisk: Astronomy 1, 2, 9; Bacteriology 1*; Biology 1, 10A-10B*; Botany 2A,* 2B,* 4; Chemistry 1A,* 1B,* 2A-2B,* 7-8*; Geography 1 or 3 (only one course may be counted toward requirement); Geology 1A, 1B,* 2A, 2B; Physical Science 1A, 1B, 10; Physics 1A-1B,* 2A-2B, 3A-3B,* 1C-1D,* 54; Physiology 1A, 1C*; Zoology 1A,* 1B,* 8,* 20.

A high school course in botany, chemistry,* physics,* physiology, zoology, or advanced biology taken in the senior year with grades not lower than B may be used in satisfying 3 units of the 12 unit natural science requirement. These courses may be counted as meeting local laboratory requirement (asterisk) if completed in junior or senior year with grade of C or better.

### Mathematics

High school elementary algebra with grade of at least C is required or completion of Mathematics A. High school plane geometry with grade of C or better is required or completion of Mathematics B.

### Lower Division Preparation for the Major

See description of requirements for teaching majors in page 20. Specific requirements for the majors in the liberal arts curricula are listed in connection with the descriptive list of courses in each major field (see pages 49-117).

### Lower Division Preparation for the Minor

See description of requirements for liberal arts minors on page 18 and for teaching minors on page 21.

### Numbering of Courses

Courses numbered 1 through 99 are in the lower division, those numbered 100 through 199 are in the upper division, and those numbered 200 or over are on the graduate level.

## SPECIFIC UPPER DIVISION REQUIREMENTS FOR THE A.B. DEGREE IN LIBERAL ARTS

The liberal arts curricula lead to the Bachelor of Arts Degree with majors in art, chemistry, commerce, economics, English, French, general engineering, geography, history, mathematics, music, physical science, physics, social science, Spanish, speech arts, and zoology and qualify for graduate work in these fields in recognized American colleges and universities. Completion of the requirements of these curricula also enables the graduate to satisfy undergraduate requirements for the general secondary credential which, with graduate work, will enable the holder to teach in a senior high school or junior college.

### Subject Matter Requirements in the Upper Division

| | |
|---|---|
| Political Science 101 | 2 unit |
| Minor (minimum in upper division courses) | 9 unit |
| Major (upper division courses) | 24 unit |

At least 40 units in upper division courses must be completed, 30 of which mus be earned after all lower division requirements have been satisfied. If a student i approaching upper division standing, he may carry sufficient lower division units t complete the required minimum of 60 and carry upper division units for the remainde of his study load. Upper division credit will be allowed for such courses.

## Explanation of Requirements

### Examination Requirements in the United States Constitution and American History, Institutions, and Ideals

Each student of a State college to qualify for graduation shall demonstrat competence in the United States Constitution and American history, institutions an ideals, by passing satisfactorily a comprehensive examination on these fields prepare and administered by the college. Students transferring from other institutions o collegiate grade who have already met this requirement may have this examinatio waived.

This examination ordinarily will be held during the second semester of the junio year. The following courses are recommended to assist in the preparation for th examination: History 17A-17B, Political Science 101 or its substitute courses, an an upper or lower division course in American literature.

### Political Science 101

History 171A-171B or 172A-172B will be accepted as substitutes for thi requirement.

### Minor

Minors must be established in one of the following fields: anthropology, art, botany, chemistry, economics, education, English, foreign language, geography, geology, history, journalism, mathematics, music, philosophy, physics, political science, psychology, sociology, speech arts, and zoology.

A minor consists of at least 15 units of work completed in one of the above fields of study. At least nine of these units must be earned in upper division courses during junior or senior years. The entire requirement for a minor may be met with upper division courses provided these courses have no lower division prerequisites. Prerequisites for each course are listed among the course descriptions on pages 49 to 117.

### Minor in Education

A student who desires to satisfy the undergraduate requirements for the general secondary teaching credential will minor in education. He should include in his program a major in a subject or field of subjects usually taught in high school and a minor in the field of education. In order to conform to the usual university requirements, this minor should include Education 102A-102B (or Education 130, and Psychology 102), and Education 115A-115B. Consultation with the Dean of Education is recommended.

### Majors

The specific requirements for each major are listed at the beginning of each departmental division among the description of courses. (See pages 49 to 117.) The student is advised to choose his major as early in his college course as practicable so that he may be able to plan his work according to the major requirements. Failure to meet the lower division requirements of the major department before the junior year may make it impossible to satisfy the upper division requirements within the normal period of two years.

### Professional and Preprofessional Courses

See pages 23 to 47.

### The General Major

The general major of 36 upper division units must be chosen from three departments with not more than 15 units from any one department allowed. A minimum of a year course in each department must be completed in the lower division as foundation for upper division work in the general major. This comprehensive major may be arranged to include minor requirements.

The general major is planned for students who are preparing for law, journalism, library work, social work, or for any other vocation requiring a background of general training. It is available also to certain students who want a general education and who can present satisfactory reasons for not specializing in any field. When the general major is not a part of a four-year curriculum published in the college bulletin the tentative program of the student should be planned in consultation with the Dean of the Upper Division and approved, revised, or rejected by the chairmen of the departments represented in the major.

## BACHELOR OF ARTS DEGREE IN TEACHER EDUCATION

San Diego State College is authorized by the State of California to recommend students for the teaching credentials listed below. To be recommended, students must complete, or have completed, the A.B. Degree in one of the curricula offered for teachers.

| *The credential* | *Subjects and grades for which it is valid* |
|---|---|
| General Elementary | All grades through the eighth. |
| Kindergarten-Primary | Kindergarten through third. |
| General Junior High | All subjects in grades seven, eight and nine in all elementary or secondary schools. |
| Special Secondary in Art | Art in all grades of the public schools. |
| Special Secondary in Business Education | Business education subjects in all grades of the public schools. |
| Special Secondary in Music | Music in all grades of the public schools. |
| Special Secondary in Physical Education | Physical education in all grades of the public schools. |
| Special Secondary in Speech Arts | Speech in all grades of the public schools. |
| Administration in Elementary Education | Authorizes for certificate to administer and supervise elementary schools as superintendent, deputy superintendent, assistant superintendent, principal, supervisor, or curriculum coordinator in a county. |
| Supervision in Elementary Education | Authorizes for certificate to supervise or coordinate instruction in elementary schools in a county. |

For special bulletin in regard to the following two credentials, write to the Registrar.

| | |
|---|---|
| General Secondary | All subjects in the public schools in grade 7 and above. |
| Special Credential in Correction of Speech Defects | Correction of speech defects in the public schools. |

### Combination of Credentials

Students who seek more than one teaching credential must complete in full the curriculum for each, with only such exceptions as are indicated in the statement of requirements. For each credential in addition to one, at least 12 additional units must be earned. These 12 units may be taken in non-professional courses if all basic curriculum requirements have been satified.

A combination of the elementary school credential and the junior high school credential may be secured by completing the requirements for the elementary school credential and the following additional requirements:

(a) A teaching major
(b) Education 100B
(c) Three units of directed teaching, or equivalent, in a junior high school
(d) Education 115B
(e) A minimum total of 132 units

A candidate for either the general elementary credential or the kindergarten-primary credential may secure the other credential subsequently or concurrently by taking 12 additional units. Four of these units shall be in directed teaching (Education 116 at the new level and the remainder as prescribed by the Director of Elementary Education.

## Lower Division Requirements

Students in teacher education curricula shall complete the lower division requirements for the A.B. Degree as indicated on page 16. Additional pattern requirement are outlined under each specific curriculum on following pages.

High school work and examination equivalents will excuse a student from pattern requirements but will not give college credit for foreign language, science social science and piano.

## Upper Division Requirements

### Minimum Units

A minimum of 40 units in upper division courses must be completed; 30 of these shall be earned after all lower division requirements have been met.

### Credit Limitations

A maximum of 40 units of credit in any one subject matter field or in education courses may be applied toward the requirements of the A.B. Degree.

### Examination Requirement in the United States Constitution and American History, Institutions, and Ideals

Each student of a State college to qualify for graduation shall demonstrate competence in the United States Constitution and American history, institutions and ideals, by passing satisfactorily a comprehensive examination in these fields prepared and administered by the college. Students transferring from other institutions of collegiate grade who have already met this requirement may have this examination waived, except for students who are to receive a teaching credential. These students must have demonstrated competence by having successfully completed a course in the United States Constitution in a California institution of collegiate grade or by having passed in California an authorized examination in this field.

This examination ordinarily will be held during the second semester of the junior year. The following courses are recommended to assist in the preparation for the examination: History 17A-17B, Political Science 101 or its substitute courses, and an upper or lower division course in American literature.

### Preparation for Graduate Work

Students who take the A.B. Degree with a special credential and who contemplate doing graduate work for a master's degree in an academic field or for the general secondary credential, will find it advantageous to use their electives to provide a foundation for that work.

## Majors and Minors

All teaching curricula require one major and one minor.

Education shall be the major for the kindergarten-primary and general elementary school credentials. Its requirements are outlined under those curricula. It is recommended that the minor for these credentials be chosen from the academic fields of English, foreign language, mathematics, science or social science. A second minor, though not required, may be chosen from one of these fields or from art, music, physical education or speech arts. Students taking an elementary credential in combination with a special secondary credential may use the special major for their minor in elementary education.

## Teaching Major for Junior High School and Special Secondary School Credentials Defined

A teaching major for the junior high school credential consists of a minimum of 24 units of which a minimum of 18 units must be in the upper division. An average of C in scholarship is required in all upper division courses in the field of the teaching major. Teaching majors may be established in the following fields: English, foreign languages, general sciences, mathematics and social sciences (anthropology, economics, geography, history, political science, sociology). A teaching major in the special secondary credential curricula of art, business education, music, physical education, and speech arts ranges from 24 to 40 units, depending upon the curriculum.

*A Teaching Major in English* shall include English 1B and 9 elective units of ower division work and 18 units of upper division work. This credit must include units in American Literature (either lower or upper division) and 3 units in hakespeare. Recommended: English 13 and 192.

*A Teaching Major in General Science for the Junior High School Credential* hall include a minimum of 24 units, not less than 18 of which are upper division, ncluding a college year course in a biological science, a year course in high school or ollege physics and a concentration of 12 units, at least 6 of which are upper division, one major subject (botany, chemistry, physics, zoology). See definition of teaching ajors.

*A Teaching Major in Social Science* shall include a minimum of 24 units not ess than 18 of which are upper division, including a year course in modern American istory and a concentration of 12 units, at least 6 of which are upper division, in one ajor subject (anthropology, economics, geography, history, political science, sociology). See definition of teaching majors.

### Teaching Minor Defined

A teaching minor consists of 15 units in a given field, of which 9 or more must e in upper division courses. Teaching minors may be established in the following elds: art, business education, English, foreign language, general science, mathematics, usic, social sciences (anthropology, economics, geography, history, political science, ociology), physical education, and speech arts. (See requirement above for elementary school credentials).

### Teaching Minor in English

Candidates for the teaching minor in English must show credit in English 1B nd 3 elective units of lower division work; and in 9 elective units in upper division nglish. This credit must include 3 units in American literature, taken either in ower division or upper division. Credit in journalism and speech arts may not be sed to fulfill the requirements for the English minor. Recommended: English 13.

### Teaching Minor in Music

Candidates for the teaching minor in music are required to take music aptitude ests at the time the minor is chosen and to enroll in at least one music activity each emester. In special cases this requirement may be waived by permission of the aculty of the Music Department.

Applicants for music minors must maintain a grade average of C in all music ourses. All students must show credit for Music 1A or clear this requirement by xamination. Music 7A is required of all candidates for the elementary credential. n the lower division, with the proper regard for course sequences, 6 units may be hosen from the following courses: Music, 1A-1B-1C-1D, 2A, 3A, 4A-4B, 6A, 8A-8B, 6, 17, 18, Aesthetics 1A-1B. Nine units of upper division music are required, not nore than two of which may be selected for credit from the activity courses (Treble lef, orchestra, etc.).

### Teaching Minor in Physical Education

Women—Candidates for a teaching minor in physical education must show credit or 9 units in the lower division including the following courses: Physical Education A, 1B, 1C, 1D, 53, and 4½ units of electives. In the upper division not less than units must be chosen from Physical Education 153, 156A-156B, 161, 164 and 170. Students wishing to minor in Physical Education should have the advice of the Physical Education Department in selecting electives.

Men—Candidates for a teaching minor in physical education must show credit n the lower division for Physical Education 1A, 1B, 1C, 1D, 53, 72, and 2 units in ports and athletics. In the upper division, Physical Education 154, 156A-156B, 170, t least 1 unit in sports and athletics, as well as 2 units in Education 100B-PE are equired.

### Admission to Teacher Education

Students who expect to become teachers should apply for admission to teacher education during the first semester of the sophomore year. Students entering the ollege at the end of the sophomore year will apply at the beginning of the junior year. No courses in education may be taken until admission is granted; any exception to his rule must have the approval of the Dean of Education. *Admission to the college* does not guarantee that the student will be admitted to teacher education. The following requirements must be met for admission to teacher education curricula:

1. A satisfactory score in a college aptitude test taken at the college. (Se college calendar for dates of test.)
2. Evidence of satisfactory ability in arithmetic, handwriting, reading an spelling indicated by having passed the fundamentals test. (See colleg calendar for dates of test.)
3. Assurance of correct speech habits and voice control by having satisfactoril completed a course in corrective speech or by having passed a speech tes given by the college.
4. Assurance of physical fitness by having passed a prescribed examination give by one of the college physicians.
5. If the student is to be a candidate for one of the special secondary credentials he must furnish a recommendation from the chairman of that departmen stating that the student has ability and shows promise of teaching success i his field and that the department looks with favor upon his application.
6. The completion of the first two years or more of a given curriculum, or it equivalent, and of subsequent work with a grade point average of 1.2 o better. (See special bulletin for general secondary.)
7. The student needs also to be approved by an interviewing committee of th college faculty. In its evaluation the committee will consider the following factors established by the State Board of Education: intelligence, scholarship, professional aptitude, personality and character, speech and language usage, and many-sided interests.

## Transfer Students

Students who have completed two or more semesters of work in another college, upon transferring to San Diego State College, should make application for admission to teacher education as soon as they enroll in the college. It will be advantageous for transfer students to present themselves for the necessary tests given during the orientation period preceding enrollment in the college.

## Advanced Standing in Teacher Education

A minimum of 6 units in education in required at this college. The college requires an opportunity to pass upon the effectiveness of a candidate's teaching ability either through a course in directed teaching or by observation of teaching in the field.

After an interval of 5 years, courses in education are reevaluated and subject to deduction in credit, in light of such new requirements as may have been put into effect and changes in educational procedures. Students formerly in attendance will not be considered to be working in the curriculum until an evaluation and statement of credit has been secured from the Registrar's office. All courses taken either at this college or elsewhere must be approved by an official adviser in order to be credited toward meeting degree requirements.

# PROFESSIONAL AND PREPROFESSIONAL CURRICULA

Professional and preprofessional courses, ranging in length from two years to hree and four years of collegiate work, are offered. The following curricular outines meet typical requirements for admission to professional schools of law, medicine, entistry, nursing, pharmacy, optometry, social work, public service, agriculture, and ngineering. The student should modify these suggested outlines of study whenever he peculiar requirements of the professional school of his choice makes it seem dvisable for him to do so.

The degree curricula in liberal arts may be modified to include the course outlines vhich follow. For a complete statement of the requirements for the junior certificate nd the degree see page 18 and following pages.

## CURRICULA LEADING TO TEACHING CREDENTIALS

All candidates in teacher education curricula should observe carefully the requirenents for admission to teacher education and be prepared to meet them at the end of he sophomore year. Students in other colleges who contemplate transferring to San Diego State College should arrange their programs so as to meet the requirements of heir particular curriculum as early as possible. See college calendar for dates when he fundamentals test will be given. See page 21 in this bulletin for requirements for dmission to teacher education.

### A.B. Degree with General Elementary or Kindergarten-Primary Credential

One teaching minor is required. See page 20 for statement

| **Freshman Year** | *Units for General Elem.* | *Units for Kdg.-Primary* |
|---|---|---|
| *First Semester* | | |
| Art 6A, Design | 2 | 2 |
| Physical Science 1A, Introduction (if H. S. physics, substitute other science) | 3 | 3 |
| English 1A, 1AA, or 1B, Freshman English | 3 | 3 |
| Health Education 1 or 2 | 2 | 2 |
| Physical Education, Freshman Activities | ½ | ½ |
| Elective (advisable to start social science; see page 16 for requirement and also for natural science and minor) | 6 | 6 |
| *Second Semester* | | |
| Art 6B, Design | 2 | 2 |
| English 11, 12, 13, 14, 15 or 16 | 3 | 3 |
| Physical Science 1B (if H. S. chemistry, substitute) | 3 | 3 |
| Psychology 1A (or in Semester I) | 3 | 3 |
| Physical Education | ½ | ½ |
| Elective (social science or minor) | 3–5 | 3–5 |
| | 31—33 | |

| **Sophomore Year** | | |
|---|---|---|
| *First Semester* | | |
| Geography 1, Elements (natural science credit) | 3 | 3 |
| Music 1A, Musicianship—Fundamentals of Music | 3 | 3 |
| Art 61A, Crafts in Elementary Schools | 2 | 2 |
| Music 28A, Piano (or the equivalent by examination, but without credit. May be taken in junior year.) | - | 1 |
| Physical Education, Sophomore Activities | ½ | ½ |
| Biology 1, Survey of Biology (If no high school laboratory, take Biol. 10A-10B or Botany 2A) (Not required if H. S. biology in junior or senior year) | 3 | 3 |
| Electives (for social science, natural science or minor) | 3 | 3 |

(Prepare for examination in American history, institutions and ideals. History 17A-B and American Literature are recommended in freshman or sophomore year.)

*Second Semester*

| | Units for General Elem. | Units fo Kdg.-Primary |
|---|---|---|
| Geography 2, Regions (social science credit) | 3 | 3 |
| Music 7A, Music Materials for the Elementary School | 3 | 3 |
| P.E. 53, Physical Education in the Elementary School | 2½ | 2½ |
| Music 28B, Piano (or the equivalent by examination) | – | 1 |
| Speech Arts 1A, Fundamentals | – | 3 |
| Electives (complete social science, natural science or minor) | 6–9 | 4 |
| | 29—32 | |

**Junior Year**

Students transferring from another curriculum in lower division or from anothe college or junior college may interchange this semester with semester II of the senio year. (Forty units of upper division work are needed.) The Education Departmen will probably find it necessary to ask some students who have met all requirements t defer entering practicum until the second semester of the junior year in order to equat class size. Those who defer entering the practicum should use this semester to

1. Complete lower division requirements in art, music, Physical Education 53 natural science, social science and others as needed.
2. Complete minor requirements.
3. Meet requirement for American History and U. S. Constitution.
4. Elect Education 102A or B if needed.

*First Semester Practicum*

| | | | |
|---|---|---|---|
| Education 102A, Measurement in Education or Education 102B, Child Growth and Development | | 3 | 3 |
| Education 147, Education Practicum-Primary Level | | 12 | 12 |
| Health Education 151 | 2 | | |
| Methods in Primary Reading | 2 | | |
| Elementary School Methods, including Children's Literature | 2 | | |
| Elementary Music Education | 1 | | |
| Elementary Art Education | 1 | | |
| Mental Hygiene and Speech | 2 | | |
| Directed Teaching | 2 | | |

*Second Semester Practicum*

| | | | |
|---|---|---|---|
| Education 102A or 102B | | 3 | 3 |
| Education 148 | | 12 | 8 |
| Elementary Arithmetic Education | 2 | | |
| Elementary Social Studies and Science Ed., including materials of audio-visual instruction | 2 | | |
| Elementary Art Education | 1 | | |
| Elementary Music Education | 1 | | |
| Educational Psychology (learning process, including theory of audio-visual education) | 2 | | |
| Additional 4 units for General Elementary, but not Kindergarten-Primary | | | |
| Language Arts | 2 | | |
| Directed Teaching | 2 | | |
| Education 116, Directed Teaching, primary grades | | – | 3 |

**Senior Year**

*First Semester*

| | | |
|---|---|---|
| Education 116 | 7 | 4 |
| Ed. 146, Kindergarten-Primary Practicum | – | 4 |
| Ed. 115A (or in second semester) | 2 | 2 |
| Elective | 3 | 3 |

*Second Semester* (and summer session if needed)

| | | |
|---|---|---|
| Political Science 101 | 2 | 2 |
| Electives to complete one minor and to equal total for degree | 14–16 | 14–16 |
| Total | 120 units | |

| Summary | *Units for General Elem.* | *Units for Kdg.-Primary* |
|---|---|---|
| Art 6A-B, 61A | 6 | 6 |
| Educ. 102A-B, 115A, 116, 146, 147, 148 | 37 | 37 |
| English | 6 | 6 |
| Speech Arts | – | 3 |
| Health Education 1 or 2, 151 | 4 | 4 |
| Physical Education 1A, B, C, 53 | 4 | 4 |
| Music 1A, 7A, 28A-B | 6 | 8 |
| Natural Sciences (including Geog. 1) | 12 | 12 |
| Political Science 101 | 2 | 2 |
| Psychology 1A | 3 | 3 |
| Social Science (including Geog. 2) | 12 | 12 |
| Electives (including minor) | 28 | 23 |
| Total | 120 | 120 |

### A.B. Degree With General Junior High School Credential

(See statements on page 20 about teaching majors and minors.) Students who expect to secure the Master of Arts Degree, or the general secondary credential, should complete 24 upper division units in the departmental major instead of the 18 upper division units required for this credential. See statement on page 19 regarding combinations of this with other credentials.

**Freshman Year**

| *First Semester* | *Units* |
|---|---|
| Biology 1 (see p. 17) | 3 |
| English 1A, or 1AA, or 1B | 3 |
| Geography 1, Elements (Natural Science) | 3 |
| Physical Education, Freshman Activities | ½ |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| Electives to meet Lower Division requirements | 3 |
| *Second Semester* | |
| Physical Science 1A or 1B (see p. 17) | 3 |
| English 13 | 3 |
| Geography 2, Regions (Social Science) | 3 |
| Physical Education, Freshman Activities | ½ |
| Electives to meet Lower Division requirements | 6 |
| | 30 |

**Sophomore Year**

| *First Semester* | |
|---|---|
| Physical Education, Sophomore Activities | ½ |
| Psychology 1A, General | 3 |
| *Second Semester* | |
| Physical Education, Sophomore Activities | ½ |
| *Either Semester* | |
| Social Sciences (see p. 17) | 3 |
| Laboratory Science (see p. 17) | 3–4 |
| Electives to meet Lower Division requirements | 22–23 |
| | 30 |

### Junior Year

| | Unit |
|---|---|
| *First Semester* | |
| Education 115B, Secondary Education | 3 |
| Education 102C, Psychology of Adolescence | 3 |
| Political Science 101, American Institutions (or substitute) | 2 |
| *Second Semester* | |
| Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Education 130, Educational Psychology | 2 |
| Education 116, Directed Teaching | 3 |
| *Either Semester* | |
| Education 100B, Methods in Major Subject | 2 |
| Health Education 151, Health Education | 2 |
| Electives, including major and minor (for the year) | 12 |
| | 31 |

### Senior Year

| | |
|---|---|
| Education 115A, History and Philosophy of Education | 2 |
| Education 116, Directed Teaching | 3 |
| Electives, including major and minor (for the year) | 24 |
| | 29 |

### Summary

| | |
|---|---|
| Education 100B, 102C, 102D, 115A, 115B, 116, 130 | 20 |
| English | 6 |
| Health Education 1 or 2; 151 | 4 |
| Natural Sciences | 12 |
| Physical Education | 2 |
| Political Science 101 | 2 |
| Psychology 1A | 3 |
| Social Sciences | 12 |
| Electives, including teaching major and minor | 59 |
| | 120 |

## A.B. Degree With Special Secondary Credential in Art

This course leads to the A.B. Degree and to the Special Secondary Credential in Art which entitles the holder to teach art in senior high, junior high, and elementary schools.

### Lower Division

| | |
|---|---|
| Aesthetics 50, History and Appreciation of Art | 2 |
| Art A, Freehand Drawing and Perspective (or equivalent) | 2 |
| Art 6A-6B, Design | 4 |
| Art 14A, Lettering | 2 |
| Art 61A, 61B, Fine and Industrial Arts, Elementary Crafts | 4 |
| English (see p. 16) | 6 |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| Natural Sciences (see p. 17) | 9–12 |
| Physical Education, Freshman and Sophomore Activities | 2 |
| Psychology 1A, General | 3 |
| Social Sciences (see p. 17) | 9–12 |
| Electives, including additional art for major and courses for teaching minor | 9–15 |
| | 60 |

**Upper Division**

| | *Units* |
|---|---|
| Aesthetics 150, Appreciation and History of Art | 2 |
| Art 106A-106B, Printmaking | 4 |
| Art 112A-112B, Design and Composition | 4 |
| Art 116A, Advanced Painting | 2 |
| Art 152A (unless 52A was taken in lower division), Stage Design | 0–2 |
| Art 195, Home Decoration | 2 |
| Electives in U. D. Art | 3–5 |
| Education 115A, History and Philosophy of Education | 2 |
| Education 115B, Secondary Education | 3 |
| Education 102C, Psychology of Adolescence | 3 |
| Education 102D, Measurement in Secondary Education | 2 |
| Education 130, Educational Psychology | 2 |
| Education 100B-A, Methods in Art | 2 |
| Education 116, Directed Teaching (4 units in special field) | 6 |
| Education 119, Art in the Elementary School | 2 |
| Health Education 151 | 2 |
| Political Science 101, American Institutions (or substitute) | 2 |
| Electives, including additional art and teaching minor | 13–17 |
| | 60 |

**Summary**

| | |
|---|---|
| Aesthetics 50 and 150 | 4 |
| Art major | 40 |
| Education | 19 |
| English | 6 |
| Health Education 1 or 2 and 151 | 4 |
| Natural Sciences | 12 |
| Physical Education | 2 |
| Political Science 101 | 2 |
| Psychology 1A | 3 |
| Social Sciences | 12 |
| Electives, including teaching minor | 15 |
| | 120 |

### A.B. Degree With Special Secondary Credential in Business Education

This course leads to the A.B. Degree and to the Special Secondary Credential in Business Education, which entitles the holder to teach business subjects in senior high and junior high schools.

In addition to the following academic requirements, satisfactory evidence of one-half year, or 1000 hours of approved experience in the field named in the credential must be submitted.

**Accounting and Secretarial Subfields**

*Lower Division*

| | |
|---|---|
| Economics 1A-1B, Principles | 6 |
| Commerce 14A-14B, Accounting | 6 |
| English 8, Business English | 3 |
| Geography 10A-10B, Economic Geography | 6 |
| Natural Sciences (see p. 17) | 9–12 |
| Physical Education, Freshman and Sophomore Activities | 2 |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| Speech Arts 1A, Fundamentals of Public Speaking | 3 |
| Psychology 1A, General | 3 |
| Secretarial Training A, Business Mathematics | 1 |
| Secretarial Training 1A-1B, Typewriting | 6 |
| Secretarial Training 5A-5B, Shorthand | 10 |
| | 60 |

| *Upper Division* | *Units* |
|---|---|
| Health Education 151 | 2 |
| Secretarial Training 3A, Office Methods and Appliances | 3 |
| Commerce 18A-18B, Commercial Law | 6 |
| Economics 100, or 102 or 111 or Commerce 123 | 3 |
| Commerce 121, Business Administration | 3 |
| Upper Division Accounting | 6 |
| Education 100B-B, Methods in Accounting | 2 |
| Education 100B-BE, Objectives and Curricula in Business Education | 2 |
| Education 102C, Psychology of Adolescence | 3 |
| Education 102D, Measurement and Evaluation in Secondary Education, Methods of | 2 |
| Education 115A, History and Philosophy of Education | 2 |
| Education 115B, Secondary Education | 3 |
| Education 116, Directed Teaching | 6 |
| Education 130, Educational Psychology | 2 |
| Education 100B-SS, Teaching Secretarial Subjects | 2 |
| Education 163 | 2 |
| Education 165, Methods in Merchandising | 2 |
| Political Science 101, American Institutions (or substitute) | 2 |
| Minor | 9 |
| Examination in American History, U. S. Constitution, etc. (see p. 18). | |
| | 60 |

## A.B. Degree With Special Secondary Credential in Music

Students intending to become applicants for this credential must show evidence of musical ability, before entering the course. They must be able to play artistically upon the piano, music of the grade of the simpler *Songs Without Words* of Mendelssohn or else possess a corresponding degree of proficiency in voice or an orchestral instrument. No credit is given to music majors for the basic courses of Music 1A and Music 7A, but if a deficiency exists in the field of general musicianship, the student will be required to take either or both of these courses without credit.

All music majors are required to enroll in two musical activities each semester. In special cases this requirement may be waived by petition to the Music Department. All students are required to pass examinations in applied music in order to receive credit. No credit is allowed to majors in voice or orchestral instruments for any work in piano which is below the level of artistic hymn playing.

Applicants for the Special Secondary Credential in Music must maintain a grade average of C or better in music courses.

All students majoring in music are required to pass a comprehensive examination in this field during the senior year.

This course leads to the A.B. Degree with a Special Secondary Credential in Music which will authorize the holder to teach music in the elementary, junior and senior high schools of the State.

A maximum of 40 units in Music may be used toward the A.B. Degree. Of these 40 units a maximum of 3 may come from the field of musical activities: band, choir, chorus, glee clubs and orchestra.

### Freshman Year

| *First Semester* | |
|---|---|
| English 1A or 1B | 3 |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| Social Sciences (see p. 17) | 3 |
| Aesthetics 1A, Survey of Music | 2 |
| Music 1B, Music Reading and Ear Training | 2 |
| Music 18A, Individual Study of Piano or Organ | 1 |
| Physical Education | ½ |
| | 13½ |

| *Second Semester* | *Units* |
|---|---|
| English 11, 12, 13, 14, 15, or 16 | 3 |
| Natural Sciences (see p. 17) | 3 |
| Aesthetics 1B, Survey of Music | 2 |
| Music 1C, Advanced Music Reading and Ear Training | 2 |
| Music 3A, Woodwind Instrument Class | 1 |
| Music 18B, Individual Study of Piano or Organ | 1 |
| Physical Education | ½ |
| Electives | 3 |
| | 15½ |

**Sophomore Year**

| *First Semester* | |
|---|---|
| Music ID, Advanced Music Reading and Ear Training | 2 |
| Music 2A, String Instrument Class | 1 |
| Music 4A, Elementary Harmony | 3 |
| Music 18C, Individual Study of Piano or Organ | 1 |
| Natural Sciences | 3 |
| Social Sciences | 3 |
| Physical Education | ½ |
| Elective | 1 |
| | 14½ |

| *Second Semester* | |
|---|---|
| Music 4B, Elementary Harmony | 3 |
| Music 6A, Brass Instrument Class | 1 |
| Music 17A, Individual Study of Voice | 1 |
| Music 18D, Individual Study of Piano or Organ | 1 |
| Psychology 1A, General | 3 |
| Natural Sciences | 6 |
| Physical Education | ½ |
| | 15½ |

**Junior Year**

| *First Semester* | |
|---|---|
| Health Education 151 | 2 |
| Music 105A, Advanced Harmony and Composition | 3 |
| Education 117A, Music in Elementary School | 2 |
| Education 145, Organization and Administration of Music Education | 2 |
| Education 102C, Psychology of Adolescence | 3 |
| Education 115B, Secondary Education | 3 |
| Upper Division Minor and Elective | 2 |
| | 17 |

| *Second Semester* | |
|---|---|
| Political Science 101, American Institutions (or substitute) | 2 |
| Music 105B, Advanced Harmony and Composition | 3 |
| Music 117B, Advanced Individual Study of Voice | 1 |
| Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Education 130, Educational Psychology | 2 |
| Upper Division Minor and Electives | 5 |
| Examination in American History, U. S. Constitution, etc. (see p. 18). | |
| | 15 |

**Senior Year**

| *First Semester* | |
|---|---|
| Music 107A, Form and Analysis | 2 |
| Music 119, Instrumental Conducting | 1 |
| Music 117C, Advanced Individual Study of Voice | 1 |
| Aesthetics 102A, Music History | 2 |
| Education 116, Directed Teaching | 6 |
| Education 100B-MU, Music Education (see Education 127) | 2 |
| Music Activities as Prescribed by the Department | 2 |
| | 16 |

| *Second Semester* | *Unit* |
|---|---|
| Music 106A, Counterpoint | 2 |
| Music 117D, Advanced Individual Study of Voice | 1 |
| Music 120A, Vocal Conducting | 1 |
| Music 121A, Instrumentation | 2 |
| Aesthetics 102B, Music History | 2 |
| Education 116, Directed Teaching | 3 |
| Music Activities as Prescribed by the Department | 1 |
| Education 115A, History and Philosophy | 2 |
| | 14 |

**Summary**

| | |
|---|---|
| Health Education 1 or 2 and 151 | 4 |
| Aesthetics 1A, 1B, 102A, 102B | 8 |
| Education 100-B-MU, 102C, 102D, 115A, 115B, 116, 117A, 130, 145 | 27 |
| English | 6 |
| Upper Division Minor | 9 |
| Natural Sciences (including Geography 1) | 9–12 |
| Music 1B, 1C, 1D, L2A, L3A, 4A, 4B, L6A, L17A-B-C-D, or 117A-B-C-D, L18A-B-C-D, or 118A-B-C-D, 105A, 105B, 106A, 107A, 117A-B-C, 119, 120A, 121A, Music Activities | 40 |
| Social Sciences (including Geog. 2, and Hist.) | 9–12 |
| Psychology 1A | 3 |
| Physical Education | 2 |
| Electives | 0–4 |
| | 120 |

### A.B. Degree With Special Secondary Credential in Physical Education

This course leads to the A.B. Degree and to the Special Secondary Credential i Physical Education which entitles the holder to teach physical education in senior high junior high, and elementary schools.

Men majoring in Physical Education are requested to participate actively in a least one sport and two additional activities per year in order to secure adequat activity background for teaching.

MEN

**Lower Division**

| | |
|---|---|
| Psychology 1A, Human Physiology | 3 |
| Zoology 1A, General (prerequisite for Zoology 8) | 4 |
| English | 6 |
| Health Education 1 | 2 |
| Natural Sciences | 3 or 5 |
| Physical Education: | |
| 1A-1B, 1C-1D | 2 |
| 30, Physical Conditioning and Training | 2 |
| 51, First Aid and Safety Education | 2 |
| 53, Physical Education in the Elementary School | 2½ |
| 72, Introduction to Physical Education | 2 |
| Sports and Athletics (as prescribed by the Department) | 2 |
| Psychology 1A, General | 3 |
| Social Sciences (see p. 17) | 12 |
| Speech Arts 1A, Fundamentals of Public Speaking | 3 |
| Zoology 8, Human Anatomy | 3 |
| Electives, including courses to meet minor requirements | 8½ |
| | 60 |

### Upper Division

| | *Units* |
|---|---|
| Education 100B-P.E. | 2 |
| Education 102C, Psychology of Adolescence | 3 |
| Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Education 115A, History and Philosophy of Education | 2 |
| Education 115B, Secondary Education | 3 |
| Education 116, Directed Teaching | 6 |
| Education 130, Educational Psychology | 2 |
| Health Education 151 | 2 |
| Political Science 101, American Institutions (or substitute) | 2 |
| Physical Education: | |
| 154, Organization and Administration of Physical Education | 3 |
| 155, Applied Anatomy and Kinesiology | 3 |
| 156A-156B, Sports Methods | 4 |
| 162A-162B, Gymnastic Procedures and Techniques | 4 |
| 170, Recreational Leadership | 2 |
| 177, Individual Program Adaptation | 3 |
| Sports and athletics (as prescribed by the department) | 2 |
| Upper Division Minor and Electives | 15 |
| Examination in American History, U. S. Constitution, etc. (see p. 18). | |
| | 60 |

### Summary

| | |
|---|---|
| Education 100B-P.E., 102C, 102D, 115A, 115B, 116, 130 | 18–21 |
| English | 6 |
| Health Education 1, 151 | 4 |
| Speech Arts 1A | 3 |
| Natural Sciences (including Biology 10A-10B or substitute and Zoology 8 or 20) | 12 |
| Physical Education teaching major | 33½ |
| Political Science 101 | 2 |
| Psychology 1A | 3 |
| Social Sciences | 12 |
| Zoology 114A | 2 |
| Electives, including minor | 21½–24½ |
| | 120 |

## (A.B. Degree with Special Secondary Credential in P.E.)

WOMEN

### Lower Division

| | |
|---|---|
| Music 1A, Musicianship—Fundamentals of Music (or equivalent) | 3 |
| English | 6 |
| Health Education 2, Health and Social Adjustment | 2 |
| Natural Sciences (including Biology 10A-10B and Zoology 1A and Zoology 8 or Zoology 20 and Physical Science 1A or Chemistry 2A) | 12 |
| Physical Education: | |
| 1A, Fundamental Skills | ½ |
| 1B, Folk Dancing | ½ |
| 1C, Rhythmic Skills | ½ |
| 1D, Team Sports | ½ |
| 3A, Modern Dance | ½ |
| 5A, Archery | ½ |
| 6A, Badminton | ½ |
| 7A, or 7B, Golf | ½ |
| 11A, Tennis | ½ |
| 51, First Aid and Safety Education | 1 |
| 53, Physical Education in the Elementary School | 2½ |
| 72, Introduction to Physical Education | 2 |
| Psychology 1A, General | 3 |
| Social Sciences (see p. 17) | 12 |
| Speech Arts 1A | 3 |
| Electives, including minor (recommended Psychology 1A and Art 61B) | 9 |
| | 60 |

**Upper Division**

| | *Uni* |
|---|---|
| Education 100B-P.E., Methods and Materials of Instruction | 0–2 |
| Education 102C, Psychology of Adolescence | 3 |
| Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Education 115A, History and Philosophy of Education | 2 |
| Education 115B, Secondary Education | 3 |
| Education 116, Directed Teaching | 6 |
| Education 130, Educational Psychology | 2 |
| Health Education 151, Health Education | 2 |
| Political Science 101, American Institutions (or substitute) | 2 |
| Physical Education: | |
| 153, Principles and Administration of Secondary Physical Education | 3 |
| 155, Applied Anatomy | 3 |
| 156A-156B, Sports Methods | 4 |
| 160, Teaching of Body Mechanics | 2 |
| 161, Folk Dancing | 2 |
| 164A-164B, Methods in Modern Dance | 4 |
| 170, Recreational Leadership | 2 |
| 177, Individual Program Adaptations | 2 |
| 185, Techniques of Individual Sports | 1 |
| Electives, including minor | 13 |
| Examination in American History, U. S. Constitution, etc. (see p. 18). | |
| | 60 |

**Summary**

| | |
|---|---|
| Music 1A | 3 |
| Education 100B-P.E. 102C, 102D, 115A, 115B, 116, 130 | 20 |
| English | 6 |
| Health Education 2, and 151 | 4 |
| Natural Sciences (including Biology 10A-10B, and Zoology 8 or 20) | 12 |
| Physical Education teaching major | 30½ |
| Political Science 101 | 2 |
| Psychology 1A | 3 |
| Social Sciences | 12 |
| Speech Arts | 3 |
| Electives, including a minor | 22½–24½ |
| | 120 |

### A.B. Degree With Special Secondary Credential in Speech Arts

**Lower Division**

| | |
|---|---|
| Speech Arts 1A-1B or 1C-1D or 60 | 6 |
| Speech Arts 55A-55B or 55C-55D | 6 |
| Speech Arts 63A-63B, 63C or 63D, Verse Choir | 1 |
| Natural Sciences | 12 |
| Social Sciences | 12 |
| Electives and Minor | 8 |
| Psychology 1A, General | 3 |
| Health Education 1 or 2, Health and Social Adjustment | 2 |
| English 1A or 1B, and 3 units from 50A-50B, 52A-52B, 56A-56B | 6 |
| Physical Education | 2 |
| Aesthetics 1A or 5 | 2 |
| | 60 |

### pper Division

| | Units |
|---|---|
| Health Education 151, Health Education | 2 |
| Education 100B-SA, Methods in Speech Arts | 2 |
| Education 102C, Psychology of Adolescence | 3 |
| Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Education 115A, History and Philosophy of Education | 2 |
| Education 115B, Secondary Education | 3 |
| Education 116, Directed Teaching | 6 |
| Education 130, Educational Psychology | 2 |
| Political Science 101, American Institutions | 2 |
| Minor | 9 |
| Speech Arts 155A-155B or 156A-156B | 6 |
| Speech Arts 163 | 3 |
| Speech Arts 150, Phonetics | 3 |
| Speech Arts Electives | 9 |
| Electives to include 6 units from P. E. 164A or 12A; English 152A-152B; Eng. 110, 116B, 117A-B; or upper division courses offered in both English and Speech Arts | 6 |
| Examination in American History, U. S. Constitution, etc. (see p. 18). | |
| | 60 |

### ummary

| | |
|---|---|
| Aesthetics 1A or 5 | 2 |
| Education 100B-SA, 102C-102D, 115A, 115B, 116, 130 | 20 |
| English | 6 |
| Health Education | 4 |
| Natural Sciences | 12 |
| Physical Education | 2 |
| Psychology 1A | 3 |
| Social Sciences | 12 |
| Speech Arts and Related Fields | 34 |
| Political Science 101, American Institutions (or substitute) | 2 |
| Electives, including teaching minor | 23 |
| | 120 |

## Special Secondary Credential in Correction of Speech Defects

This credential is granted only to students who can verify two years of successful eaching experience and who hold a valid California teacher's certificate, credential or fe diploma of elementary or secondary school grade.

### .ower Division Requirements

| | |
|---|---|
| Psychology 1A, General Psychology | 3 |
| Speech Arts 1A, Fundamentals of Public Speaking | 3 |
| Speech Arts 1C, Oral Interpretation | 3 |
| Elective in lower division Speech Arts | 6 |

### Jpper Division Requirements

| | |
|---|---|
| Speech Arts 150, Phonetics | 3 |
| Psychology 118, Mental Hygiene | 3 |
| Education 179A-B, Nervous Speech Disorders | 6 |
| Speech Arts 212, Articulatory Disorders | 3 |
| Education 316, Directed Teaching | 4 |

## PRE-AGRICULTURAL CURRICULA

The high school program should include the following subjects: elementa algebra 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; trigonometry, ½ un chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit; foreign langua 3 units in one language.

Students should ascertain the lower division requirements of the agricultu college they expect to enter.

The following arrangement of courses is recommended:

### Curriculum in Plant Science

**Freshman Year**

| | *Units* |
|---|---|
| Physical Education | ½ |
| Health Education 1 or 2 | 2 |
| Chemistry 1A-1B | 5 |
| Botany 2A-2B | 4 |
| Physics 2A-2B | 3 |
| Elective (Foreign language if not completed in high school) | 2 |
| | 16½ |

**Sophomore Year**

| | |
|---|---|
| Physical Education | ½ |
| Economics 1A-1B | 3 |
| Chemistry 7-8 | 3 |
| Geology 1A or 2A | 3 |
| Bacteriology 1 | -- |
| Zoology 1A | 4 |
| Elective (Foreign language if not completed in high school) | 3 |
| | 16½ |

### Curriculum in Animal Science

**Freshman Year**

| | |
|---|---|
| Physical Education | ½ |
| Health Education 1 or 2 | 2 |
| Chemistry 1A-1B | 5 |
| Zoology 1A-1B | 4 |
| Physics 2A-2B | 3 |
| Geology 2B | -- |
| Elective | 2 |
| | 16½ |

**Sophomore Year**

| | |
|---|---|
| Physical Education | ½ |
| Economics 1A-1B | 3 |
| Chemistry 7-8 | 3 |
| Bacteriology 1 | 4 |
| Botany 2A | 4 |
| Zoology 100 | -- |
| Zoology 20 or 8 | -- |
| Elective | 2 |
| | 16½ |

## PRE-DENTAL CURRICULUM

Candidates for a degree in dentistry should ascertain the entrance requirements of the dental college to which they expect to transfer and should make whatever changes in the following typical requirements that may seem desirable in satisfying the requirements of the dental college.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; foreign language, 3 units in one language.

The following arrangement of courses is recommended:

| **Freshman Year** | *Units* | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education 1 or 2 | -- | 2 |
| Chemistry 1A-1B | 5 | 5 |
| Physics 2A-2B | 3 | 3 |
| English | 3 | 3 |
| Psychology 1A | 3 | -- |
| Foreign language (if needed to complete requirement) | 0–5 | 0–5 |
| Elective | 0–2 | 0–2 |
| | 16½ | 15½ |

| **Sophomore Year** | | |
|---|---|---|
| Physical Education | ½ | ½ |
| Chemistry 7-8 | 3 | 3 |
| Zoology 1A-1B | 4 | 4 |
| Social Science Year Course | 3 | 3 |
| Elective | 5 | 6 |
| | 15½ | 16½ |

## PRE-ENGINEERING CURRICULUM

This curriculum is intended for students planning an intensive specialization i particular branches of engineering.

The high school program should include the following subjects: elementar algebra, 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; solid geometry, ½ unit trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit

Students should ascertain the requirements of the engineering college they expec to enter.

### Mechanical, Electrical, Civil and Mining Engineering

**Freshman Year**

| | *Units* | |
|---|---|---|
| Mathematics 3A-3B | 3 | 3 |
| Chemistry 1A-1B | 5 | 5 |
| Physics 1A-1B | 3 | 3 |
| Physical Education | ½ | |
| Health Education 1 or 2 | -- | 2 |
| *Geology 1A or elective | 4 | -- |
| Elective | -- | 3 |
| | 15½ | 16 |

### Mechanical and Electrical Engineering

**Sophomore Year**

| | | |
|---|---|---|
| Engineering 1A | 3 | -- |
| Engineering 21 | 3 | -- |
| Engineering 22 | -- | 3 |
| Engineering 23 | -- | 2 |
| Mathematics 4A-4B | 3 | 3 |
| Mathematics 118 or 119 | -- | 3 |
| Physics 1C-1D | 3 | 3 |
| Physical Education | ½ | |
| Elective | 3 | 2 |
| | 15½ | 16 |

### Civil Engineering

**Sophomore Year**

| | | |
|---|---|---|
| Astronomy 3 | -- | 2 |
| Engineering 1A-1B | 3 | 3 |
| Engineering 21 | 3 | -- |
| Engineering 23 | -- | 2 |
| Mathematics 4A-4B | 3 | 3 |
| Physics 1C-1D | 3 | 3 |
| Physical Education | ½ | ½ |
| Elective | 3 | 3 |

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* Geology 1A is required in the civil engineering curriculum.

## CURRICULUM IN GENERAL ENGINEERING

A four-year curriculum is available at San Diego State College leading to the A.B. Degree in General Engineering. The curriculum is designed to provide the student with the fundamentals of an engineering and technical education without intensive specialization. It is planned to provide considerable elective opportunities, which will enable the student to adapt the program to his particular needs, with emphasis on one branch of engineering training, science, or business.

All students with aptitude for professional engineering and the financial means are urged to complete the requirements for the degree in mechanical, electrical, or civil engineering in our State university or at some other institution having a standard engineering school. There is, however, an increasing need for college graduates in fields of engineering, engineering science, or business engineering, where an intensive specialized training is not necessary. Students with training in a general engineering curriculum may easily adapt their programs to provide preparation for work in various engineering fields, as the electrical, heating and ventilation, public utility, telephone, and aeronautical industries among many others. Preparation is also available for work in chemical engineering, engineering physics, and engineering economics. Students may also use this curriculum as an undergraduate preparation for additional work in certain graduate engineering colleges. Students who desire to prepare for teaching of engineering and allied subjects in the secondary schools and the junior colleges may use this curriculum, along with certain courses in education, to satisfy the undergraduate requirements for the general secondary credential.

The curriculum is not a specialized sequence of course work in specific engineering fields. If such specialized training is desired in the engineering fields, transfer to various colleges offering such work is recommended after completion of the lower division.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; solid geometry, ½ unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit.

### Lower Division

All college requirements for the A.B. Degree must be met except foreign language. (See p. 16.)

| **Freshman Year** | *Units* |
|---|---|
| Chemistry 1A-1B | 10 |
| Physics 1A-1B | 6 |
| Mathematics 3A-3B | 6 |
| English Composition | 3 |
| Health Education 1 or 2 | 2 |
| Physical Education | 1 |
| Psychology 1A | 3 |
| Biology 1 (or equivalent) | 3 |
| | 34 |

| **Sophomore Year** | |
|---|---|
| English | 3 |
| Physics 1C-1D | 6 |
| Mathematics 4A-4B | 6 |
| Electives chosen from the following | 9 |
| Engineering 1A-1B | |
| Engineering 21 | |
| Engineering 22 | |
| Geology 1A | |
| Chemistry 7-8 | |
| Social Science | 6 |
| Physical Education | 1 |
| | 31 |

### Upper Division

During the first semester of his junior year the student must prepare and subm for approval of his advisors a tentative program for the remainder of his undergraduat work.

Political Science 101 (or equivalent).

Examination in American History, U. S. Constitution, etc. (see p. 18).

Complete the following major in general engineering: a total of 36 upper divisio coordinated units in three departments chosen from the following list (not more tha 15 units may be chosen from one department).

The organization of the program of each major student must follow a definit plan approved by the proper advisors. Additional courses will be added from time t time. Required of all students (20 units):

| | *Unit* |
|---|---|
| Engineering 100A-100B, Electrical Engineering | 6 |
| Engineering 105, Hydraulics | 3 |
| Engineering 123, Materials of Engineering Construction | 2 |
| Engineering 128, Heat Power Engineering | 3 |
| Physics 105A-105B, Analytical Mechanics | 6 |
| Electives: 16 units, of which at least 6 units must be chosen from one of the following departments: chemistry, geology, astronomy, mathematics, or economics. | |
| Chemistry 110A-110B, Physical | 6 |
| Chemistry 105A, Quantitative Analysis | 3 |
| Chemistry 112A-112B, Industrial Chemistry | 6 |
| Chemistry 144, Industrial Analysis | 3 |
| Physics 110A, Advanced Electricity | 3 |
| Physics 110B, Electromagnetism-electronics | 3 |
| Physics 107A-107B, Electrical Measurements | 2 |
| Physics 108, Modern Physics | 3 |
| Physics 112, Advanced Heat-Thermodynamics | 3 |
| Physics 112L, Heat-Pyrometry Lab. | 1 |
| Physics 114, Acoustics | 3 |
| Geology 100, Structural Geology | 3 |
| Geology 101, Problems in Geology | 4 |
| Astronomy 100, Navigation-Astronomy | 3 |
| Astronomy 107, Least Squares | 3 |
| Mathematics 118, Advanced Calculus | 3 |
| Mathematics 119, Differential Equations | 3 |
| Mathematics 124, Vector Analysis | 3 |
| Mathematics 140, Probability-Statistics | 3 |
| Economics 107, Credit and Credit Institutions | 3 |
| Economics 121, Business Administration | 3 |
| Economics 123, Principles of Marketing | 3 |
| Economics 131, Public Finance and Taxation | 3 |
| Economics 133, Corporation Finance | 3 |
| Economics 135, Money and Banking | 3 |
| Economics 140, Statistical Methods | 3 |
| Economics 150, Labor Problems and Industrial Relations | 4 |
| Economics 171, Transportation | 3 |
| Industrial Economics | 3 |
| (Economics 14A-14B recommended) | |

A student who desires to satisfy the undergraduate requirements for the general secondary teaching credential should include in his upper division work, in addition to the engineering major, certain courses in education which will partially satisfy the credential requirements. In order to conform to the usual university requirements this work should be chosen from Education 102C-102D and Education 115A-115B. Consultation with the Dean of Education is recommended.

## PRE-FORESTRY CURRICULUM

### Freshman Year

| | *Units* | |
|---|---|---|
| ysical Education | ½ | ½ |
| emistry 1A-1B | 5 | 5 |
| tany 2A-2B | 4 | 4 |
| glish 1B and 11or 12, 13, 14, 15, 16 | 3 | 3 |
| thematics 3A-3B | 3 | 3 |
| | 15½ | 15½ |

### Sophomore Year

| | | |
|---|---|---|
| ysical Education | ½ | ½ |
| ysics 2A-2B, 3A-3B | 4 | 4 |
| gineering 1A-1B | 3 | 3 |
| onomics 1A-1B | 3 | 3 |
| ology 2A | 3 | -- |
| alth Education 1 or 2 | -- | 2 |
| emistry 7 | 3 | -- |
| ective | -- | 4 |
| | 16½ | 16½ |

## PRE LEGAL CURRICULUM

*The entrance requirements of law colleges range from two years to three and fo years of pre-legal work. The lower division requirements of the liberal arts curricu should be met in full whether the curriculum extends over a period of two, three, four years.*

The following curriculum meets the recommendations of standard American la colleges for a broad and liberal education in those fields of human knowledge common involved in human affairs and those which have cultural and disciplinary values. F the majority of pre-legal students a general major with concentration in economic as provided for in the following curriculum, furnishes the most effective preparati for later professional study in law and for later activities in the field of busines However, for some students a major, or at least strong minors, in English, history, political science, may provide a suitable preparation.

The high school program should include the following subjects: elementa algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign languag 3 units in one language or 2 units in each of two languages.

Following is a recommended arrangement of courses:

### Freshman Year

| | Units | |
|---|---|---|
| Physical Education | ½ | |
| Health Education 1 or 2 | -- | |
| Foreign Languages (if needed to complete requirement) | 0–5 | 0– |
| Natural Science (see lower division requirements) | 3–5 | 3– |
| English | 3 | |
| Economics 14A-14B | 3 | |
| Psychology 1A | 3 | |
| Elective | 0–3 | 0– |
| | 15½ | 1 |

### Sophomore Year

| | | |
|---|---|---|
| Physical Education | ½ | |
| Additional Natural Science (if needed to meet requirement) | 3 | |
| Economics 1A-1B | 3 | |
| Philosophy 3A-3B, 5A-5B, or Mathematics 3A-3B | 3 | |
| Political Science 1A-1B or 71A-71B | 3 | |
| Elective | 3 | |
| | 15½ | 1 |

### Junior Year

| | | |
|---|---|---|
| Economics 121 | 3 | |
| Economics 133 | 3 | |
| Economics Elective | -- | |
| History 151A-151B or 175A-175B | 3 | |
| Political Science 111 and 113 or 143A-143B | 3 | |
| Sociology 105, 106 | 3 | |
| Elective (see upper division requirements) | 3 | |
| Examination in American History, U. S. Constitution, etc. (see p. 18) | | |
| | 15 | 1 |

### Senior Year

| | | |
|---|---|---|
| Economics 100A | 3 | |
| Economics Electives | -- | |
| History 111A-111B or 121A-121B | 3 | |
| Political Science 175A-175B | 3 | |
| Elective | 6 | |
| | 15 | 1 |

## PRE-MEDICAL CURRICULUM

The entrance requirements of medical colleges ordinarily range from three to four years of pre-medical work. The lower division requirements of the liberal arts curricula include the general requirements of standard medical colleges and should therefore be met in full whether the curriculum extends over a period of three or of four years. All plans for pre-medical work should include an arrangement of courses to meet the requirements of the medical college which the student expects to enter.

A student who is pursuing a four-year pre-medical curriculum should major in chemistry or zoology in his junior and senior years, and must meet all upper division requirements for the A.B. Degree in the liberal arts curricula.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units. Two units of Latin are recommended.

Following is a recommended arrangement of courses:

### Freshman Year

| | *Units* | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education 1 or 2 | 2 | -- |
| Chemistry 1A-1B | 5 | 5 |
| English 1A or 1B, and 11, 12, 13, 14, 15, or 16 | 3 | 3 |
| French or German (if needed to meet requirement) | 0–5 | 0–5 |
| Elective | 0–5 | 0–8 |
| | 15½ | 16½ |

### Sophomore Year

| | | |
|---|---|---|
| Physical Education | ½ | ½ |
| Zoology 1A-1B | 4 | 4 |
| Psychology 1A | 3 | -- |
| Chemistry 7-8 | 3 | 3 |
| Social Science | 3 | 3 |
| Elective | 3 | 6 |
| | 16½ | 16½ |

### Junior Year

| | | |
|---|---|---|
| Political Science 101 | 2 | -- |
| Physics 2A-2B | 3 | 3 |
| Physics 3A-3B | 1 | 1 |
| Chemistry 105 | 3 | -- |
| Zoology 100 | -- | 4 |
| Zoology 100D | -- | 1 |
| Zoology 106 | 4 | -- |
| Electives | 2 | 6 |
| Examination in American History, U. S. Constitution, etc. (see p. 18) | | |
| | 15 | 15 |

### Senior Year

| | | |
|---|---|---|
| Upper division requirements and electives for the major, the minors and the degree (see page 18) | 15 | 15 |
| | 15 | 15 |

## PRE-NURSING CURRICULUM

A student who plans to complete a curriculum in nursing leading to a degree and a certificate in nursing in another collegiate institution should ascertain the lower division (junior certificate) requirements of that institution.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units; domestic science (foods), 1 unit; 2 units of Latin are recommended. The following is a recommended arrangement of courses:

### Freshman Year

| | *Units* | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education | -- | 2 |
| Biology A | -- | 1 |
| Chemistry 2A-2B | 3 | 3 |
| Psychology 1A | 3 | -- |
| English 1A or 1B and 11, 12, 13, 14, 15, or 16 | 3 | 3 |
| French or German (if needed to complete requirement | 0–5 | 0–5 |
| Elective | 0–6 | 0–7 |
| | 15½ | 16½ |

### Sophomore Year

| | | |
|---|---|---|
| Physical Education | ½ | ½ |
| Psychology 1B | 3 | -- |
| Economics 1A-1B | 3 | 3 |
| Bacteriology 1 | 4 | -- |
| Physiology 1A, 1C | -- | 5 |
| Zoology 8 | 3 | -- |
| Elective | 3 | 7 |
| | 16½ | 15½ |

## PRE-OPTOMETRY

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; trigonometry, ½-unit; physics, 1 unit; chemistry, 1 unit; foreign language, 3 units.

The following curriculum prepares for junior standing in university schools of optometry:[1]

### Freshman Year

| | Units | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education 1 or 2 | 2 | -- |
| Foreign Language (if needed to complete requirements) | 3 | 3 |
| Physics 2A-2B | 3 | 3 |
| Physics 3A-3B | 1 | 1 |
| Psychology 1A | 3 | -- |
| Speech Arts 1A-1B | 3 | 3 |
| Elective | -- | 6 |
| | 15½ | 16½ |

### Sophomore Year

| | | |
|---|---|---|
| Physical Education | ½ | ½ |
| Chemistry 1A-1B | 5 | 5 |
| Mathematics 3A | 3 | -- |
| Social Science | 3 | 3 |
| Physiology 1A and 1C | -- | 5 |
| Elective | 4 | 3 |
| | 15½ | 16½ |

---

[1] Student should consult catalogue of school he plans to attend.

## SOCIAL WORK

The professional curriculum in social service prepares for admission to graduate work in recognized American schools of social work. This curriculum should be pursued by those who plan careers in Federal, State and local welfare work; social work in public schools including preparation for a teaching credential; family and children's private case work agencies; social settlement work; county probation work; child welfare agencies; statistical and investigational work in private and public agencies; work in public institutions for the defective and delinquent; medical social service and psychiatric social work in hospitals and clinics; executive positions in social work; and social work in numerous other organizations.

The lower division requirements of the liberal arts curricula include the general requirements of recognized professional schools of social work and should therefore ordinarily be met in full. However, a student who has definitely decided not to become a candidate for a degree in San Diego State College may substitute the lower division requirements of the institution to which he expects to transfer wherever the requirements differ.

A student who pursues a four-year curriculum in San Diego State College should major in social science and minor in psychology.

The following subjects should be completed in high school: elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; foreign language, 3 units in one language.

Following is the required arrangement of courses:

| Freshman Year | *Units* | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education 1 or 2 | -- | 2 |
| Biology 10A-10B | 3 | 3 |
| Foreign Language (if needed to complete requirement) | 0–5 | 0–5 |
| Psychology 1A | 3 | -- |
| Speech Arts 1A-1B or English elective | 3 | 3 |
| Elective | 1–6 | 2–7 |
| | 15½ | 15½ |

| Sophomore Year | | |
|---|---|---|
| Physical Education | ½ | ½ |
| Economics 1A-1B | 3 | 3 |
| Political Science 1A-1B or 71A-71B | 3 | 3 |
| Additional Natural Science (if needed to meet requirement) | 3 | -- |
| Sociology 50A | 3 | -- |
| Sociology 50B | -- | 3 |
| Elective | 3 | 6 |
| | 15½ | 15½ |

| Junior Year | | |
|---|---|---|
| Economics 100B or 131 or 150 | -- | 3 |
| Sociology 105 | 3 | -- |
| Sociology 109 | -- | 3 |
| Psychology 150 | 3 | -- |
| Psychology 151 | -- | 3 |
| Zoology 114A | 2 | -- |
| Political Science 101 | 2 | -- |
| Elective | 5 | 6 |
| Examination in American History, U. S. Constitution, etc. (see p. 18) | | |
| | 15 | 15 |

| Senior Year | | |
|---|---|---|
| Economics 140 | 3 | -- |
| Sociology 197 | 3 | -- |
| Sociology Elective | -- | 3 |
| Psychology 145 | 3 | -- |
| Political Science 143A-143B or restricted elective | 3 | 3 |
| Elective | 3 | 9 |
| | 15 | 15 |

## PRE-VETERINARY CURRICULUM

Most colleges of veterinary medicine require but one year (32 units) of pre-veterinary college work. There are a few colleges which require two years and it is best to consult the bulletin of the college to which admission is desired for special requirements. The year of pre-veterinary work should include:

| | *Units* | |
|---|---|---|
| Physical Education | ½ | ½ |
| Chemistry 1A-1B | 5 | 5 |
| Zoology 1A-1B | 4 | 4 |
| English | 3 | 3 |
| Health Education 1 or 2 | 2 | -- |
| Electives | 2 | 4 |
| | 16½ | 16½ |

Recommended: Botany 2A-2B, a year course of some social science, Psychology 1A.

## PUBLIC ADMINISTRATION

As the vocational demand for students of public administration is comparativel limited, the student of public administration will do well to prepare himself also fo a related field of work for which there is not only a cultural but also a vocationa demand. The candidate for a public administrative position who is equipped for career in a professional, scientific or technical field that is common to both public an private enterprise has a distinct advantage. The special courses in public administration listed in the following curriculum are supplementary courses designed for exploration and orientation. The curriculum as a whole provides for a major in economics outlines a general preparation for the public service in social science fields and furnishe a basis for more highly specialized graduate courses in the field of public administration

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language 3 units in one language.

The following arrangement of courses is recommended:

### Freshman Year

| | *Units* | |
|---|---|---|
| Physical Education | ½ | |
| Health Education 1 or 2 | -- | 2 |
| English | -- | 3 |
| Foreign Language (if needed to complete requirements) | 0–5 | 0–5 |
| Psychology 1A | 3 | -- |
| Natural Science | 3–5 | 3–5 |
| Economics 14A-14B | 3 | 3 |
| Elective | 0–5 | 0–4 |
| | 16½ | 15 |

### Sophomore Year

| | | |
|---|---|---|
| English | 3 | -- |
| Physical Education | ½ | |
| Additional Natural Science (if needed to meet requirements) | -- | 3 |
| Economics 1A-1B | 3 | 3 |
| Political Science 1A-1B or 71A-71B | 3 | 3 |
| Elective | 7 | 6 |
| | 16½ | 15 |

### Junior Year

| | | |
|---|---|---|
| Economics 100A | 3 | -- |
| Economics 140 | 3 | -- |
| Economics 100B | -- | 3 |
| Economics 131 | -- | 3 |
| Political Science 175A-175B | 3 | 3 |
| Elective | 6 | 6 |
| Examination in American History, U. S. Constitution, etc. (see p. 18) | | |
| | 15 | 15 |

### Senior Year

| | | |
|---|---|---|
| Economics 150 | -- | 3 |
| Economics 107, 133, 135, 171 | 3 | -- |
| Economics electives | 3 | 3 |
| Political Science 143A-143B | 3 | 3 |
| Elective | 6 | 6 |
| | 15 | 15 |

## INTER-AMERICAN RELATIONS

The purpose of this curriculum is (1) to furnish a basis for a more intelligent and effective understanding of the opportunities and problems of international relations in the western hemisphere; (2) to provide facilities for a basic education and training for a business or professional career which involves international relations.

Competition for opportunities of service in international affairs is severe. The student who plans a career in this field should therefore organize his electives to provide for a concentration in some area of work in which there are greater vocational opportunities. Preparation for employment as a foreign representative of an American business organization implies concentration in economics. The student who pursues this curriculum as a guide for training for the foreign service in consular, vice consular, secretarial, and other public offices should include additional courses in foreign language, history, political science, geography, and economics to furnish more effective preparation for the comprehensive competitive examinations required for appointment to the Service and for entrance to the Foreign Officers Training School at Washington, D. C.

The proper faculty adviser should be consulted for revisions and additions to this curriculum to meet individual needs and objectives.

The high school program should include the following subjects: algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language, 3 units in one language.

The following arrangement of courses is recommended:

### Freshman Year

| | *Units* | |
|---|---|---|
| Physical Education | ½ | ½ |
| Health Education 1 or 2 | 2 | -- |
| English | 3 | 3 |
| Spanish | 0–5 | 0–5 |
| Natural Science | 3–5 | 3–5 |
| History 8A-8B | 3 | 3 |
| Psychology 1A | -- | 3 |
| Elective | 4–8 | 0–3 |
| | 15½ | 15½ |

### Sophomore Year

| | | |
|---|---|---|
| Physical Education | ½ | ½ |
| Additional Natural Science (if needed to meet requirements) | 0–3 | -- |
| Economics 1A-1B | 3 | 3 |
| Political Science 1A-1B or 71A-71B | 3 | 3 |
| Geography 1 | 3 | -- |
| Elective | 0–6 | 9 |
| | 15½ | 15½ |

### Junior Year

| | | |
|---|---|---|
| Political Science 141 | 3 | -- |
| Political Science 142 | -- | 3 |
| History 173A-173B | 3 | 3 |
| Spanish 104A-104B | 3 | 3 |
| Elective | 6 | 6 |
| Examination in American History, U. S. Constitution, etc. (see p. 18) | | |
| | 15 | 15 |

### Senior Year

| | | |
|---|---|---|
| Economics 195 | 3 | -- |
| Economics 198 (Special Study—Western Hemisphere) | -- | 3 |
| History 161 | -- | 3 |
| History 163 | 3 | -- |
| Geography 116 | -- | 3 |
| Geography 121 | 3 | -- |
| Elective | 6 | 6 |
| | 15 | 15 |

# COURSES OF INSTRUCTION

Figures in parentheses indicate the unit value of the course.

Courses numbered from 1 to 99 are lower division (freshman or sophomore) courses; those numbered 100 and above are upper division (junior or senior) courses.

Freshmen are not admitted into upper division courses.

A sophomore may enroll in an upper division course for lower division credit provided he has earned an average grade of not less than 1.5 in all college work undertaken, and provided he receives the instructor's permission to enroll in the course. A second semester sophomore may enroll in an upper division course for upper division credit without the foregoing grade limitations provided the units earned in the upper division course or courses are in excess of the 60 units required in the lower division.

One "unit" represents an hour recitation or lecture, together with the required preparation, or three hours laboratory work each week for a semester of 18 weeks.

The semester in which courses are offered is designated as follows: (1) Fall; (2) Spring; (3) Fall and Spring; (4) Year course, beginning either Fall or Spring; (5) Year course. Courses designated as "Year course" begin in the Fall, but those given in the list below may be taken in the reverse order (i.e., the second semester of the course may be taken before the first semester) or the second semester may be taken alone. In the case of other year courses, students who have completed the equivalent of the first semester's work may seek permission from the instructor to take the second half of the course.

## YEAR COURSES OPEN TO REGISTRATION IN THE MIDDLE OF THE YEAR

Aesthetics 1A-1B
Aesthetics 102A-102B
Anthropology 1A-1B
Anthropology 151A-151B
Economics 160A-160B
English 50A-50B
English 52A-52B
English 56A-56B
English 106A-106B
English 107A-107B
English 117A-117B
French 101A-101B
French 105A-105B
French 107A-107B
French 110A-110B
French 111A-111B
History 3A-3B
History 4A-4B
History 8A-8B
History 17A-17B
History 111A-111B
History 121A-121B
History 131A-131B
History 146A-146B
History 151A-151B
History 156A-156B
History 171A-171B
History 172A-172B
History 173A-173B
Political Science 1A-1B
Political Science 71A-71B
Spanish 101A-101B
Spanish 102A-102B
Spanish 104A-104B
Spanish 105A-105B
Spanish 110A-110B
Speech Arts 55A-55B
Speech Arts 55C-55D
Speech Arts 155A-155B
Speech Arts 156A-156B

Although the college fully expects to carry out the arrangements planned in the list of courses, it reserves the right to make changes. Classes in which the enrollment does not come up to the minimum number set by the State Department of Education may not be offered or may be postponed.

# DIVISION OF EDUCATION

## EDUCATION

### Upper Division Courses

### 100B Methods and Materials of Instruction

A series of professional methods courses in major and minor teaching fields. Each course carries two units of credit and must be taken prior to, or concurrently with directed teaching.

Subject sections in 100B are as follows:

| | *Semester offered* |
|---|---|
| Ed. 100B-A, Methods in Art | Both |
| Ed. 100B-B, Methods of Accounting | Fall |
| Ed. 100B-BE, Objectives and Curricula in Business Education | Spring |
| Ed. 100B-E, Methods in English | Spring |
| Ed. 100B-L, Romance Language Methods | Spring |
| Ed. 100B-MA, Mathematics | Fall |
| Ed. 100B-MU, Methods in Music | Fall |
| Ed. 100B-PE, Methods in Phys. Ed. (Men) | Both |
| Ed. 100B-PE, Methods in Phys. Ed. (Women) | Both |
| Ed. 100B-SC, Methods in Science | Spring |
| Ed. 100B-SA, Methods in Speech Arts | Fall |
| Ed. 100B-S.SC, Methods in Social Sci. | Fall |

### 102A. Measurement and Evaluation in Elementary Education

A course required of all students preparing for an elementary teaching credential. It deals with the use of tests in the diagnosis and improvement of learning; construction of objective examinations; problems of evaluation in education; and the elements of statistical techniques. Fall and Spring (3)

### 102B. Child Growth and Development

The course deals with a study of the mental, emotional, social, and physical development during childhood and early adolescence.

Directed observation required. Students who have credit in Psychology 102A or 102B will receive only half credit for this course. Fall and Spring (3)

### 102C. Psychology of Adolescence

Experience and instruction organized around a study of the adolescent in today's society. The course deals with the adolescent's physiological, psychological, social, and emotional development as important determinants of the educational program. To be taken during the junior year. (3)

### 102D. Measurement and Evaluation in Secondary Education

The course deals with the use of educational and psychological tests in the diagnosis of difficulties and improvement in learning; problems of evaluation in education; construction of objective examinations; and the elements of statistical techniques. (2)

### 103. Federal, State, and County School Organization, and Administration

A study of support, control, and agencies representative of each of these governmental units, with particular attention to the functions of the State and county in the educational program of California. Designed to meet the requirement as prescribed for the elementary school administration credential. (3)

### 109B. Educational Administration and Supervision Field Work

Individual field work as required for the administration credential. By arrangement with the Dean of Education. (3)

### 110. Educational Organization and Supervision

Types of supervision and methods of evaluating and improving teaching. Prerequisites: Graduation from college with a teaching credential or two or more years of teaching experience. (3)

### 115A. History and Philosophy of Education

Historical backgrounds and underlying philosophies upon which the moder public school system has been established. The content covers such problems as th meaning of education, educational aims and values, and democracy and education Prerequisite: Senior standing or the equivalent. Fall and Spring (2)

### 115B. Secondary Education

The role of the teacher in secondary education; methods, materials, and directe observation of classroom teaching and management; trends in the organization an development of the secondary school curriculum. To be taken during the junio year. Fall and Spring (2)

### 116. Directed Teaching

Systematic observation, participation and teaching under supervision in th campus elementary school, the affiliated elementary, junior high and senior hig schools. During the first semester of directed teaching in the secondary schools a weekly conference period is required as indicated in the time schedule.

The general plan is for elementary school credential candidates to take, i addition to the education practicums, a half-day of teaching daily in the campus elementary school or two and one-half hours daily in one of the affiliated elementar schools throughout one semester. Junior high school and special secondary schoo credential candidates will be guided by their adviser relative to the distribution of thei directed teaching. For those seeking a combination of credentials, the requirement for each teaching level must be satisfied. Further information regarding this requirement should be requested of the Dean of Education when the student first register for directed teaching.

Thirty clock hours of directed teaching will usually carry one unit of credit in th course, but the final amount of credit allowed will depend upon the character an quality of the teaching done by the student. Directed teaching requirements may b reduced for those who furnish evidence of successful public school experience.

The maximum amount of credit allowed for directed teaching is twelve units.

The universities usually reduce the amount of directed teaching credit they wil allow to four units. Students planning to transfer to such institutions should b prepared to meet this reduction with an equal number of acceptable units in othe courses.

No grade below a C is acceptable for credit in directed teaching.

Prerequisites: Completion of 75 units of college work; admission to teache education; a C average in all college work and in the work of the preceding semester three units of work in psychology; a minimum of one semester's work in this college No credit will be given unless the student registers in advance for this course in th office of the Dean of Education.

### 117A. Elementary Music Education

Main objectives of music teaching in the public elementary schools. Study o the child voice. Organization of song material by grades. Procedure in presentin rote songs, ear training, elementary notation, music reading, and part singing. Conducting. Not open to students taking the elementary credential, nor to freshmen Prerequisite: Music 1A, or the equivalent. Fall and Spring (2)

### 117B. Methods in Instrumental Music

A study of the theory of problems or organizing and conducting school band and orchestras, and the selection of materials. Provides practical experience in conducting a children's orchestra and teaching sectional groups. A study of systemati planning of courses of study for pupils of various ages and abilities will be made. (2)

### 119. Art in the Elementary School

Discussion of the elements and principles of art and their place in the art expression and appreciation of the elementary school child. Lectures illustrated wit examples of children's work and opportunity given for experience with mediums use in elementary school problems. Not open to students taking the elementary credential. Prerequisite: Art 6A. Fall and Spring (2)

### 122. Social Studies in the Elementary School

A study of the nature and purpose, scope, organization and instructional procedures in the social studies in the elementary school. Opportunity will be given fo the construction of curriculum units and the analysis of teaching materials. (2)

**127. Secondary Music Education (See Education 100B)**

Main objectives of music teaching in the public secondary schools. Organization of the chorus and glee clubs, voice testing, seating, a survey of song materials available. Organization of courses in applied music, harmony, history and appreciation. (2)

**129. Arithmetic in Elementary Education**

A course for teachers of arithmetic in the elementary and junior high school. Emphasis is placed upon the understanding of the systems of notation and language techniques. Assistance given to constructing instructional materials and procedures. (2)

**130. Educational Psychology**

A study of the science of human behavior as it relates to learning. Emphasis is given to the principles of learning and maturation of the organism. Special aspects treated are the growth of meanings, thinking, memory and habit formation, motivation, transfer of learning, organic and environmental conditions affecting learning, and individual differences. Prerequisite: Psychology 1A. (2)

**136. Reading in the Primary Grades**

A study of procedures in guiding children's learning to read through the first three grades. This will include practical suggestions for teachers in developing reading readiness, beginning reading, independence in word recognition and reading as a thinking process throughout this period. Analysis will be made of individual and group problems; selection, preparation and use of materials will be studied. (2)

**144. Diagnosis and Remedial Treatment of Difficulties in Reading**

Lectures and demonstrations relative to the causes of reading difficulties and the procedures for diagnosis and remedial treatment. Students will be expected to do practical work with children who have reading difficulty. The work is designed primarily for principals, supervisors and teachers-in-service. Prerequisite: Education 102B or Education 102A, or one year of successful teaching experience. (3)

**145. Organization and Administration of Music Education**

Theory of the general principles of music administration; correlation of music with the various subjects in the public schools; music tests; creative work. (2)

**146. Education Practicum** (Kindergarten-Primary)

This course is a continuation of Education 148 and should accompany Education 116 in the kindergarten. It is a study of the theory of early childhood education. Provides experience with children of nursery school and kindergarten ages. Prerequisite: Education 147, 148. (4)

**147. Education Practicum**

This course is required of all students who expect to receive a credential which will qualify them to teach in the kindergarten or in the elementary school. Students should take the course during the next semester after admission to Teacher Education, which is usually the first semester of the junior year. Registration is strictly limited to those who have been approved by the Committee on Admission to Teacher Education.

Education Practicum is a unified course which deals with the interpretation and intelligent application of theory and practice in elementary education. The child and accumulated knowledge are studied as one affects the other. The psychology of learning is interpreted while the college student is immediately associated with children in the process of learning. For two or three hours each day classes are held in which the psychology and philosophy of education are studied and anaylzed as systems of knowledge and concurrently interpreted in reference to the actual teaching participation to which the student is assigned for one hour daily. The course includes Health Education 151 (2); Methods in Primary Reading (2); Elementary School Methods, including Children's Literature (2); Elementary Music Education (1); Elementary Art Education (1); Mental Hygiene and Speech (2); Directed Teaching (2).

The course is taught by college teachers who supervise in the Campus Elementary School, and other faculty members (12).

### 148. Education Practicum

The course is a continuation of Education 147 and is required of all students who are candidates for the general elementary credential or the kindergarten-primary credential. An extended analysis is made of the psychology of education in various fields and application is made through directed teaching in grades 4 to 6. The course includes Elementary Arithmetic Education (2); Elementary Social Studies and Science Education (2); Elementary Art Education (1); Elementary Music Education (1); Educational Psychology (learning process) (2). Additional 4 units for General Elementary only: Language Arts (2); Directed Teaching (2). Prerequisite: Education 147. (12)

### 149A. Laboratory in Elementary Education

A general course in observation and theory covering all teaching done in the summer demonstration school, including arithmetic, reading, language, music, science, social studies, art, spelling. Students in this course will observe in the summer demonstration school and discuss with the staff the teaching procedures. (3)

### 149B. Workshop in Elementary Education

Students in this course will select a problem related to their professional assignment for the coming year and work upon it in the summer session under the guidance of the staff. Groups of teachers may work together upon common curriculum problems or toward other objectives in personal or professional improvement. Special interests, community study, field trips, subject matter areas, and many other types of experience which will provide educational source background may be selected. Students should correspond with the Director of Elementary Education in advance to secure most effective planning of the course.

This course can be very profitably combined with 149A. Arrangements may be made to secure 6 units of credit. (3)

### 149C. Laboratory in Rural Education

Observation in a one-room multigraded summer demonstration school. Students will observe demonstrations, discuss procedures with the staff, and prepare material for their own schools. (6)

### 155. Principles of Guidance

An analysis of the problems of pupil personnel, guidance and parent-teacher relationships in the public schools. A study of the source materials useful in guidance and a survey of the literature pertaining to the principles and practices of guidance. (3)

### 163. Methods in Secretarial Subjects

### 165. Methods in Merchandising

### 174. Audio-Visual Aids in Instruction

A study of audio-visual aids as they affect learning. Analysis and development of materials of instruction and their presentation; operation of equipment. (2)

### 175. The Organization and Administration of Elementary Schools, Including School Law

A course designed to fit the needs of teachers in service who are preparing for elementary school principalships. This course is a prerequisite for Education 109B, Educational Administration and Supervision, Field Work, and is designed for teachers who hold an elementary school credential. Attention will be directed to problems associated with the personnel, finance, curriculum, plant, community relations, and legal aspects involved in the administration of elementary schools. (3)

### 176. Problems of Speech Correction and Articulation

Analysis and discussion of the major articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. (3)

### 177. The Teaching of Lip Reading

History, theory and methods of lip reading. Aids for the classroom teacher; program and materials of instruction for the specialized teacher. Opportunities for practice teaching are offered. (2)

### 178. Problems of the Hard of Hearing

The adjustment of the hard of hearing group with emphasis on the public school child. State and county hearing programs; technique of audiometry; use of hearing aids; educational, classroom, and social problems. (2)

### 179. Speech Disorders

Classification of speech defects and disorders. Nervous speech disorders; stammering, stuttering, hesitation, cluttering. Teacher training in corrective technique for use in public schools; clinic observation. Required of candidates for the Special Secondary Credential in Speech Correction. (3)

### 199. Educational Problems

A course for senior students in residence and enrolled in teacher education who have shown ability to work independently on educational problems. The problem can be chosen only after consultation with a staff member. Admission by consent of the staff. Credit and hours to be arranged.

### 201. Curricular Problems in Secondary Education

Appraisal of outstanding studies in the content and organization of the secondary school curriculum, followed by the student's own investigation of problems in either his major or minor field. Topics for study will be determined jointly by students and instructor. To be taken in the graduate year. (2)

### 202. Guidance Problems in Secondary Education

A study of good guidance procedures. An analysis of the psychological and educational factors involved in assisting high school students to adjust themselves to the high school situation, and problems of guiding youth in the selection and preparation of a life career. To be taken in the graduate year. (2)

### 316. Directed Teaching

Systematic observation, participation, and teaching under supervision in an affiliated high school. Thirty clock hours of directed teaching will usually earn one unit of credit, but the credit finally allowed will depend upon the nature and quality of the teaching done. Any work below a C grade is unacceptable for credit in this course. (6)

No student can enroll in this course until he has completed at least 5 units of work in education.

During the semester in which the student takes his first assignment in directed teaching, he must meet with the college supervisor one hour each week for conference and discussion of problems encountered in his teaching.

Students who have had directed teaching in preparation for the junior high school or special secondary credentials should confer with their departmental and educational advisers concerning partial fulfillment of this requirement as the result of having completed the directed teaching required for the credentials mentioned above.

# DIVISION OF FINE ARTS

## AESTHETICS

### Lower Division Courses

**1A-1B. Survey of Music**

Correlation of music and other arts. Designed to stimulate enjoyment of music by developing intelligent listening. The elements of music, its structure, folk music of all countries, musical instruments, and the contributions of the best known composers, with some biographical study of these men. Compositions are presented by orthophonic recording and by class members. Attendance at a number of local concerts is required. No previous musical training or background is necessary. Music majors are required to complete additional assignments for full credit.

Year course (2-2)

**5. Art Orientation**

An illustrated lecture course involving a study of aesthetic meaning and its relation to the structure of art products. Designed to increase both understanding and appreciation of the visual world in general and of the fine arts in particular.

Fall and Spring (2)

**50. Appreciation and History of Art**

A survey of aesthetics development as revealed in the painting, sculpture, architecture, and handicrafts from dawn of art to the Renaissance. Illustrated.

Fall (2)

**51. Survey of Mexican Art**

A study of Mexican and Middle American Art from earliest time to present.

Fall (2)

### Upper Division Courses

**102A-102B. Music History**

The various movements in the development of music as related to the other arts. The chronological development of the art of music, with particular emphasis on the larger works. Considerable attention is given to the works of modern composers. Many symphonic works are studied from the orchestral scores. Music majors are required to complete additional assignments for full credit. Prerequisite: Aesthetics 1A or 1B.

Year course (2-2)

**150. Appreciation and History of Art**

The period from the Renaissance through the modern school, treated in the same manner as in Aesthetics 50.

Spring (2)

## ART

Many students, regardless of the field in which they may be majoring, recognize the need for an intelligent approach to the subject of art and art appreciation. However, due to the erroneous popular feeling that art is so specialized a subject as to require "talent," these students may refrain from enrolling in any art courses.

For students who desire a better understanding of art, but who do not hope to acquire any of the art skills, the following courses are recommended:

| | *Units* |
|---|---|
| Aesthetics 5, Fundamentals of Art | 2 |
| Aesthetics 50, History and Appreciation of Art | 2 |
| Aesthetics 51, Survey of Mexican Art | 2 |
| Art 8, Costume and Home-furnishing | 2 |

Other courses which require certain skills but which are not beyond the ability of the average college student are:

| | |
|---|---|
| Art 61B, Crafts | 2 |
| Art 6A, Design | 2 |
| Art A, Freehand drawing | 3 |
| Art 94, Costume design | 2 |

For students who might wish to complete a minor in art after having met the lower division requirements from the preceding page, the following courses are recommended as not requiring special training in drawing and design:

| | |
|---|---|
| Art 119, Ceramics | 2 |
| Art 152A, Stage Design | 2 |
| Aesthetics 150, History and Appreciation of Art | 2 |

Candidates for a teaching credential in art should refer to the statement "Admission to Teacher Education" on page 21.

Lower division preparation for the liberal arts major in art: Aesthetics 5 or 51, and 50; Art A-B and 6A-6B, or the accepted equivalents, and six elective units in art.

Liberal arts major (upper division): Twenty-four upper division units. These shall include Art 112A, 115A-115B, 116A, 152A, 195, or the accepted equivalent; Aesthetics 150. It is recommended that the students in meeting degree requirements and in choosing free electives, select from the following courses: Anthropology 151A-151B; English 106A-106B, 107A-107B, 117; French A-B; History 4A-4B, 111A-111B.

For courses in Appreciation and History of Art and Fundamentals of Art, see Aesthetics, page 54.

## Lower Division Courses

### A-B. Drawing and Composition

Semester I: Problems involving perspective to develop ability to draw still life, furniture, exteriors, interiors, and the like.

Semester II: Outdoor sketching of landscape and figure, and studio work from still life and costume pose. Emphasis on composition and technique in the handling of various mediums, pencil, pen and ink, charcoal, pastel, and water color.

Year course (2-2)

### 6A. Design

Fundamentals of design and composition and theory of color. Basic course used as a prerequisite for all advanced work.

Fall and Spring (2)

### 6B. Design (continued)

Original work in creative design and representation with special stress on modern tendencies. Prerequisite: Art 6A.

Fall and Spring (2)

### 7. Line, Color and Display

The principles of line, color and arrangement applied to store and window display. Study and observation of windows, color and materials used in display. Building models and practical problems in arranging colors, textures, and forms in windows to fit different kinds of merchandise.

Fall and Spring (2) (Not offered in 1945-46)

### 8. Costume and House Furnishings

An appreciative study of modern architecture and modern house furnishings, with emphasis on the spirit of gracious living and an appreciative study of the modern dress with emphasis on suitability to the figure, the personality and the occasion.

Fall and Spring (2)

### 11A. Industrial Design

Design of objects for manufacture with reference to their use, materials, and in accordance with factory practices and machine techniques. Prerequisite: Art 6A-6B, A.

Fall (2)

### 11B. Advanced Industrial Design

Advanced problems with particular attention to the techniques of presentation—working drawings, renderings in perspective and scale models. Prerequisite: Art 6A-6B, A, 11A.

Spring (2)

### 14A. Lettering

Fundamental art principles applied to lettering. Practice for quick, accurat lettering; original problems using letters as design. Prerequisite: Art 6A.

Fall (2)

### 14B. Posters and Commercial Art

The application of lettering to posters, newspaper and magazine advertising, an other forms of commercial art. The study of composition combined with lettering an special study of modern tendencies in publicity. Prerequisites: Art 6A, 14A.

Spring (2)

### 15A-15B. Life Drawing

Drawing from the nude model. Prerequisite: Art A-B.

Year course, beginning either Fall or Spring (2-2)

### 16A-16B. Painting

Semester I: Composition of still life and flower forms in water color and oi Semester II: Landscape and more advanced composition in water color and oil. Pr requisite: Art A-B.

Year course, beginning either Fall or Spring (2-2)

### 52A. Stage Design

Theory of line, color, and lighting in relation to the stage. Original sets an costumes developed on a miniature stage. Study of the development of the modern ar of the theater. Upper division credit will be given in this course to students of junio standing upon the completion of extra theme work and additional original problems Prerequisite: Art 6A.

Fall (2)

### 52B. Stage Costume (See 152B)

Fall (2)

### Art 61A. Crafts in the Elementary Schools

A foundation course which develops unification of work of the elementary grade through activities and experiences. These experiences grow out of environmenta activities. They include study and working of clay, lumber and tools, textiles, an cardboard construction. Prerequisite: Art 6A.

Fall and Spring (2)

### 61B. Crafts

Problems involving the application of design principles to various fields—pottery textiles, weaving, metal work, wood-carving, and book-binding. Prerequisite: Art 6A

Fall and Spring (2)

### 94. Costume Design

Original designs of modern costumes suitable to the individual or to distinct types the drawing of fashion figures; the rendering of fabrics and textures. Prerequisite Art 6A.

Spring (2)

### 95. Interior Decoration (See Art 195)

## Upper Division Courses

### 106A-106B. Printmaking

Study of print crafts which includes the making of linoleum blocks, wood engravings, etchings and lithographs. Prerequisites: Art A, B, 6A.

Year course (2-2)

### 106C. Illustration

Same as 106A-B except that printmaking is applied to problems of book illustration. Prerequisites: Art A, B, 6A.

Spring (2)

**112A-112B. Design and Composition**

Imaginative organization of space by means of color, dark and light, perspective, and textures of various materials. Prerequisites: Art A-B, 6A-6B, and if possible 15A-15B or 106A.

Year course (2-2)

**115A-115B. Life Drawing and Painting**

Drawing and painting from nude and costume models.

Year course, beginning either Fall or Spring (2-2)

**115C-115D. Advanced Life**

Painting from nude and costume models and advanced composition in oil. Portraiture. Prerequisite: Art 115A-115B.

Year course, beginning either Fall or Spring (2-2)

**116A-116B. Advanced Painting**

Painting in water color and oils from still life and landscape, stressing composition and technique. Prerequisite: Art 16A-16B.

Year course, beginning either Fall or Spring (2-2)

**119A. Ceramics**

Building of pottery on the basic techniques of coil, slab, mold making, and slip casting. Ceramic sculpture, glazing and kiln operations.

Fall (2)

**119B. Ceramics**

Study of glazes and elementary clay technology. Mold making, slip casting with application to individual creative problems.

Spring (2)

**152A. Stage Design**

See Art 52A.

**152B. Stage Costume**

Costume studied in relation to drama, opera and dance. Original designs for mood and character. Practical problems in designing costumes and accessories for college productions. Prerequisites: Art 6A, 52A or 152A.

Fall (2)

**194. Costume Design** (See Art 94)

Spring (2)

**195. Interior Decoration**

Lectures and designing in class, trips to art galleries, stores, factories and homes, studying how to recognize and choose the best in furniture, rugs, wall coverings, textiles and pottery as to design, color and materials. Actual experience in designing and arranging furnishings in homes and offices. Working with local stores and architects. Arrangement of flowers and objects for different types of rooms and occasions. Prerequisites: Art A, 6A.

Spring (2)

## MUSIC

Candidates for a teaching credential in music should refer to the statement "Admission to Teacher Education Curricula" on page 21 and to the other degree requirements on that page and those following. The curriculum for the A.B. Degree with a Special Secondary Credential in Music is on page 28.

Lower division preparation for the liberal arts major in music: Music 1B-1C-1D; 4A-4B; 4 units of Applied Music (study of piano, voice or orchestral instrument); Aesthetics 1A-1B.

Liberal arts major (upper division): twenty-four upper division units. These shall include Music 105A-105B; 106A; 107A; 119A, 120A, 121A; 4 units of Applied

Music; Aesthetics 102A-102B; and 4 units of music activity credit (Music 111, 112, 113, 115, or 130).

At least a C average in upper division music courses is necessary.

It is recommended that students in meeting degree requirements and in choosing free electives, select from the following courses: English 56A-56B; French A-B; German A-B; History 4A-4B; 146A-B; Physics 2A-2B.

## Lower Division Courses

### 1A. Musicianship—Fundamentals of Music

The elements of music; scale construction; elementary music theory; drill in music reading both with syllables and with words; ear training, elementary music dictation. Basic course for all general elementary credential students. Music majors receive no credit.

Fall and Spring (3)

### 1B. Musicianship—Music Reading and Ear Training

Tonal and rhythmic dictation; rhythmic writing; sight singing. Basic course for majors and minors. Text—Smith and Krone: Fundamentals of Musicianship Book I. Prerequisite: Music 1A, or the equivalent. Music majors not able to pass the departmental entrance examination in the fundamentals of music will take 1A without credit in preparation for this course.

Fall and Spring (2)

### 1C-1D. Musicianship—Advanced Music Reading and Ear Training

Tonal work in minor keys; modal scales; dissonant triads and seventh chords; interval feeling in all chords; rhythmic progression and elementary forms; rhythmic, melodic and harmonic dictation. Prerequisite: Music 1B.

Year course (2-2)

### 2A. String Instruments

Beginner's class in violin, viola, 'cello and string bass. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

Fall and Spring (1)

### 3A. Woodwind Instruments

Beginner's class in oboe, clarinet, flute and bassoon. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

Fall and Spring (1)

### 4A-4B. Elementary Harmony

Scale construction, intervals, by-tones and diatonic harmonies. Transposition and original composition in the simpler forms. Text—Alchin: Applied Harmony Vol. I. Prerequisite: Music 1A-1B, or the equivalent, and at least one year of piano study.

Year course (3-3)

### 6A. Brass Instruments

Beginner's class in trumpet, French horn, baritone, trombone and tuba. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

Fall and Spring (1)

### 7A. Music Materials for the Elementary School

Study of the song material in the state music texts and in the supplementary texts. Appreciation materials applicable to the elementary school. Required course for all general elementary credential students. Prerequisite: Music 1A.

Fall and Spring (3)

**11A-B-C-D. Women's Glee Club—Treble Clef**

Entrance upon examination.

Fall and Spring (½-½)

**12A-B-C-D. Men's Glee Club**

Entrance upon examination.

Fall and Spring (½-½)

**13A-B-C-D. Orchestra**

Permission of the conductor required for membership.

Fall and Spring (1-1)

**15A-B-C-D. Choral Club**

Entrance upon examination.

Fall and Spring (½-½)

***16A-16B-16C-16D. Individual Study of an Orchestral Instrument**

Fall and Spring (1-1)

***17A-17B-17C-17D. Individual Study of Voice**

Fall and Spring (1-1)

***18A-18B-18C-18D. Individual Study of Piano or Organ**

Prerequisite: The ability to play artistically hymns and folk songs of the type found in the Golden Book of Favorite Songs.

Fall and Spring (1-1)

**20A-B-C-D. Chorus**

Open to anyone interested in singing standard choral works. No examination required.

Fall and Spring (½-½)

**26A-B-C-D. Band**

Permission of the conductor required for membership.

Fall and Spring (½-½)

**28A-28B. Piano**

Fundamental playing and reading technics for the pianoforte. Emphasis upon playing by ear, and the development of interpretative ability. For beginners only. No credit for music majors and minors.

Year course (1-1)

**29A-B. Class Voice**

A class for beginners in the vocal field taking up the problems of breath control, tone placement, articulation and enunciation. Frequent performance before class required. Limited to 15.

Year course (1-1)

**30A-B. Chamber Music**

String and woodwind ensembles. The consent of the instructor necessary for admission to class.

Year course (1-1)

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* See page 61, conditions under which credit may be given for music study under private instructors.

## Upper Division Courses

**102A-102B. Music History**

The various movements in the development of music as related to the other art The chronological development of the art of music, with particular emphasis on th larger works. Considerable attention is given to the works of modern composer Many symphonic works are studied from the orchestral scores. Music majors ar required to complete additional assignments for full credit. Prerequisite: Aestheti 1A or 1B.

Year course (2-2)

**105A-105B. Advanced Harmony and Composition**

Study of the possible types of modulation and chromatic harmonies: continuatio of harmonic analysis and original composition. Text—Alchin: Applied Harmon Vol. II. Prerequisite: Music 4A-4B.

Year course (3-3)

**106A. Counterpoint**

Study of the five species of counterpoint with much practice in writing in suc forms. Application of contrapuntal style to modern composition. Prerequisite Music 4A-4B.

Fall (2)

**107A. Form and Analysis**

Aural and visual analysis of music forms through a consideration of structur harmonic content, and style. Prerequisite: Music 105A-105B.

Spring (2)

**111A-B-C-D. Women's Glee Club—Treble Clef**

Entrance upon examination.

Fall and Spring (½-½) (A maximum of 2 units in glee club may be counte toward the A.B. Degree)

**112A-B-C-D. Men's Glee Club**

Entrance by examination.

Fall and Spring (½-½) (A maximum of 2 units in glee club may be counte toward the A.B. Degree)

**113A-B-C-D. Orchestra**

Permission of the conductor required for membership.

Fall and Spring (1-1) (A maximum of 4 units in orchestra may be counte toward the A.B. Degree)

**115A-B-C-D. Choral Club**

Entrance by examination.

Fall and Spring (½-½) (A maximum of 2 units in Choral Club may be counte toward the A.B. Degree)

***116A-116B-116C-116D. Advanced Individual Study of an Orchestral Instrumer**

Fall and Spring (1-1)

***117A-117B-117C-117D. Advanced Individual Study of Voice**

Fall and Spring (1-1)

***118A-118B-118C-118D. Advanced Individual Study of Piano or Organ**

Fall and Spring (1-1)

**119A. Instrumental Conducting**

Conducting and reading of orchestral scores.

Fall and Spring (1)

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* See page 61, conditions under which credit may be given for music study unde private instructors.

**120A. Vocal Conducting**

The theory of vocal conducting together with practical experience gained from directing the college chorus. Prerequisite: Music majors with senior standing.

Fall and Spring (1)

**121A. Instrumentation**

Arranging of music for full orchestra. Selected works of pupils to be performed by standard orchestras.

Fall and Spring (2)

**126A-B-C-D. Band**

Permission of the conductor required for membership.

Fall and Spring (½-½) (A maximum of 4 units in band may be counted toward the A.B. Degree)

**130A-130B. Chamber Music**

String quintet and woodwind ensembles only. Permission of the instructor necessary for class membership.

Year course (1-1)

## CONDITIONS UNDER WHICH CREDIT MAY BE GIVEN FOR MUSIC STUDY UNDER PRIVATE INSTRUCTORS

Credit may be allowed for private instruction in music under the following conditions:

1. The applicant for such credit must be a regularly enrolled student in the music department of the college.
2. The instructor giving such private work must be approved by the Music Department. All private work and the names of all such teachers must be registered in the office of the music department chairman at the beginning of the semester.
3. In the case of first semester private study, a placement examination conducted by the music department faculty at the beginning of the semester will show the status of the student at the beginning of his work.
4. Evidence that the standards of the Music Department have been met will be shown by an examination conducted by the music department faculty at the end of the semester.

# DIVISION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

## HEALTH EDUCATION

### Lower Division

**1. Health and Social Adjustment** (Men)

An informational course in personal and community hygiene. A study of soci hygiene and the hygienic principles of living. Speakers from the County Medic Association on subjects of vital interest enrich the offerings of this course. It especially desirable that this course be taken in the freshman year.

Fall and Spring (2)

**2. Health and Social Adjustment** (Women)

An informational course, reviewing the principles underlying the improveme of personal health, and the solution of practical problems of young women and pro pective homemakers. Lectures by specialists in the various fields serve to enrich t course. Required of all freshmen who are candidates for junior standing or the degre

Fall and Spring (2)

**61A. Nutrition**

The purpose of this course is to consider health maintenance through fo selection from the modern scientific viewpoint. Consideration is given to the fund mentals of an adequate diet from the basis of the known dietary essentials and of t disorders which result from the deprivation of these factors. Diets for special nee are also planned. Recommended for pre-medical, pre-dental, pre-nursing, and so ology majors. Red Cross Nutrition Certificate is granted upon course completion.

Spring (2)

**61B. Nutrition—Laboratory**

A basic course in food preparation which includes the study of typical fo selection and preparation methods which best conserve the essential food flavors a nutrients. Class meets once a week and is open only to students who have register in Nutrition 61A.

Spring (1)

**90. Physiology of Reproduction** (Women)

A course consisting of a series of lectures and discussion dealing with norm and abnormal physiology and anatomy of reproduction, facts and frauds in s hygiene, and related topics. Prerequisite: Health Education 2.

Fall and Spring (1)

### Upper Division

**151. Health Education** (Education 147-148)

A course for teacher-education students which includes the study of the diseas common physical defects, and health indices of school children; the detection a control of communicable diseases which may appear in the school; and the eleme which underlie a health education program. Methods of presenting personal a group health to children of different ages. Hygiene of the schoolroom, such as seati lighting, and ventilation.

Fall and Spring (2)

## PHYSICAL EDUCATION

### Men's Department

Candidates for a teaching credential in physical education should refer to t statement "Admission to Teacher Education Curricula" on page 21. For the teach education curriculum in physical education see page 30.

### Lower Division Courses

A two-hour activity course each semester is required for the two years of lower division. A medical examination is given each student when entering and the work is fitted to his needs. Individual Adapted Activity sections to fit the special needs of the individual student are included. The content of the required two years is planned to give each student an opportunity to participate in those sports which have carry-over value into after life in addition to body building exercises and endurance training. Opportunity is given all students to take part in the regular competitive sports program.

Intercollegiate sports may be taken in addition to required lower division courses. A maximum of one unit in sports in one semester may be counted toward the A.B. Degree.

**1A-1B. Freshman Activity.**

Year course, beginning either Fall or Spring (½-½)

**1C-1D. Sophomore Activity**

Year course, beginning either Fall or Spring (½-½)

Demonstrated ability to pass standard tests in body agility and game skills will permit student to substitute sports participation for required courses.

**Sports and Athletics**

2A-2B-2C-2D, Boxing (½)
3A-3B-3C-3D, Track (1)
4A-4B-4C-4D, Baseball (1)
5A-5B-5C-5D, Basketball (1) (½ Fall, ½ Spring)
6A-6B-6C-6D, Badminton (½)
7A-7B-7C-7D, Golf (½)
8A-8B-8C-8D, Wrestling (½)
9A-9B-9C-9D, Cross Country (½)
10A-10B-10C-10D, Swimming (½)
11A-11B-11C-11D, Tennis (½)
13A-13B-13C-13D, American Football (1)
13X-13Y-13Z, Spring Football (½)
14A-14B-14C-14D, Gymnastics (½)
15A-15B-15C-15D, Fencing (½)
16A-16B-16C-16D, Archery (½)

Any of above sports will be offered only if demand is sufficient.

**30. Physical Conditioning and Training**

Methods and procedure of securing the mental and physical condition necessary for maximum performance in athletics. Diet, massage, and training procedure given special attention. (2)

**51. First Aid and Safety Education**

The accepted procedure in meeting the emergencies which arise daily in schoolroom, play or athletic field, beach, mountains, or any of the many places where the physical director is called on for first aid. Special attention given to the arrangement of the apparatus and the activities so that many of the most common accidents are prevented or minimized. Course content qualifies for Red Cross Certificate. (2)

**53. Physical Education in the Elementary School**

The content of the State program in physical education forms the basis of the course. Two lectures, two one-hour laboratory periods per week. (2½)

**72. Introduction to Physical Education**

An orientation course in the history, philosophy, and objectives of physical education. (2)

### Upper Division Courses

**154. Principles and Administration of Physical Education in Secondary Schools**

The philosophy and principles of physical education and its relation to general education. Analysis of present-day programs and methods in terms of objectives. The study of selection and adaptation of activities, examination and grouping of pupils, testing the results of teaching, evaluation of the teacher, provision of equipment, and departmental organization. (3)

### 155. Applied Anatomy and Kinesiology

Principles of body mechanics; analysis of joint mechanism and muscular actio in fundamental movements, everyday activities, sports, dancing, and gymnastic exercises. Prerequisite: Zoology 8. (3)

### 156A. Sports Methods

Different theories and methods of teaching the more highly organized tean sports: Football, basketball, and baseball. (2)

### 156B. Sports Methods

Methods of teaching those sports most adaptable to the intramural and recreational programs: Golf, handball, soccer, speedball, volley ball, badminton, archery tennis, swimming, track, etc. (2)

### 162A. Gymnastic Procedure and Techniques

Theoretical and practical work in marching, free exercises, and light and heav apparatus. Emphasis on progression and method of presenting material. Th simplest and most explanatory terminology. (2)

### 162B. Gymnastic Procedure and Techniques

Acquisition of proficiency in the performance of a great group of gymnasti stunts always popular in the gymnasium and on the playground. Work of th recreational or self-interesting type rather than the formal. Tumbling, stunts, an pyramid-building given chief attention, although games of low organization are als considered. (2)

### 170. Recreational Leadership

Fundamentals of recreational leadership developed by instruction in club an camp activities, the study of school recreational needs and facilities, and of civi recreation. Open to all upper division men and women. Recommended to student interested in the recreational aspects of social service. (2)

### 177. Individual Program Adaptation

Adjustments of the physical education program to the physical needs an capacities of individuals; problems concerning protective and preventive measure which are not highly specialized corrective phases. (2)

### 200. Tests and Measurements in Physical Education

Study and evaluation of tests and measurements in the field of physical education. Practice in the use of tests and interpretation of results. Prerequisite: Graduat standing. (2)

### 201. Corrective Physical Education

Study of postural abnormalities and their correction through exercise. Practice in giving examinations, planning exercise programs, and teaching correctiv exercises. Prerequisite: Graduate standing. (3)

### 202. Problems in Physical Education and Recreation

Survey of the literature, discussion of trends and current problems in physica education and recreation. Observation of school and community activities. Analysi and evaluation of a problem situation. Written reports required. Prerequisite Graduate standing. (3)

## Women's Department

Candidates for a teaching credential in physical education should refer to th statement "Admission to Teacher Education Curricula" on page 21, and to the outlin for the A.B. Degree with Special Credential in Physical Education on page 31.

## Lower Division Courses

Two hours per week of directed physical activity are required through out th freshman and sophomore years. Freshman students may choose courses from th following, 1A, 1B, 1C. Sophomore students may choose from all activity course offered.

**1A. Fundamental Skills**

Practice in efficient fundamental body movements.
Fall and Spring (½)

**1B. Folk Dancing**

Fall and Spring (½)

**1C. Rhythmic Skills**

Fall and Spring (½)

**1D. Team Sports**

(All four are required of all women candidates for the special credential in physical education.)
Fall and Spring (½)

**Sophomores may elect from the following**

**2A-2B. Folk Dancing**

Fall and Spring (½)

**3A-3B-3C-3D. Modern Dance**

Fall and Spring (½)

**4A-4B. Social Dancing—for men and women**

Fall and Spring (½)

**5A-5B. Archery**

Fall and Spring (½)

**6A-6B. Badminton**

Fall and Spring (½)

**7A-7B. Golf**

Fall and Spring (½)

**11A-11B. Tennis**

Fall and Spring (½)

**12A-12B. Advanced Modern Dance**

Laboratory experiments in advanced choregraphy and percussion accompaniment. For men and women. Prerequisites: 1C and 3A for women, 1C for men.
Fall and Spring (1-1)

*Any of the above activities may be taken for additional credit*

**51. First Aid and Safety Education**

Standard American Red Cross First Aid course; accident prevention; materials and methods in safety education.
Fall (1)

**53. Physical Education in the Elementary School**

The content of the State program in physical education forms the basis of the course. Two lectures, two one-hour laboratory periods per week.
Spring (2½)

**72. Introduction to Physical Education**

An orientation course in the history, philosophy, and objectives of physical education. (2)

**Sports**

1. The individual activities, tennis, golf, archery, badminton and dancing are offered through the year. Candidates for the special credential in physical education select *one* as a major activity and two others as minors. Skills in the activities thus

selected must be maintained as prerequisite to the senior course, Physical Educatio 185. (See page 66.)

2. The Women's Recreation Association sponsors the intramural sports program. Under its direction competition in dual and group games is promoted throughout the year. Open to all college women.

### Upper Division Courses

Open to all women. Required of women candidates for the special credentia in physical education.

**153. Principles and Administration of Secondary Physical Education**

The philosophy and principles of physical education and its relation to genera education. Analysis of present-day programs and methods in terms of objectives. The study of selection and adaptation of activities, examination and grouping o pupils, testing the results of teaching, evaluation of the teacher, provision of equipment, and departmental organization. Selection and use of audio-visual aids. Open to both men and women.

Fall (3)

**155. Applied Anatomy and Kinesiology**

Principles of body mechanics; analysis of joint mechanism and muscular action in fundamental movements, everyday activities, sports, dancing, and gymnastic exercises. Prerequisite: Zoology 8.

Spring (3)

**156A-156B. Sports Methods**

Analysis of skills in basketball, hockey, soccer, speedball, volleyball, and softball; methods of presenting sports to large groups; study of rules and officiating. (2-2)

**160. Teaching of Body Mechanics**

A study of efficient use of the body in daily living; evaluation and classification of exercises, methods and practice in planning and presenting material.

Fall (2)

**161. Folk Dancing Materials and Advanced Techniques**

A study of folk customs, festivals, and costumes. Selection of dance materials for various age groups. Practice in advanced techniques.

Spring (2)

**164A-164B. Methods in Modern Dance**

Laboratory experiments in advanced choreography and percussion accompaniment. Historical survey and practical experience in production techniques and teaching methods. Two activity periods and one lecture per week. Open to both men and women.

Year course (2-2)

**170. Recreational Leadership**

Fundamentals of recreational leadership developed by instruction in club and camp activities, the study of school recreational needs and facilities, and of civic recreation. Open to all upper division men and women. Recommended to students interested in the recreational aspects of social service.

Spring (2)

**177. Individual Program Adaptations**

Adjustments of the physical education program to the physical needs and capacities of individuals; problems concerning protective and preventive measures which are not highly specialized corrective phases.

Spring (2)

**185. Techniques of Individual Sports**

A course summarizing rules and teaching methods, and testing individual playing ability.

Fall (1)

**200. Tests and Measurements in Physical Education**

Study and evaluation of tests and measurements in the field of physical education. Practice in the use of tests and interpretation of results. Prerequisite: Graduate standing. (2)

**201. Corrective Physical Education**

Study of postural abnormalities and their correction through exercise. Practice in giving examinations, planning exercise programs, and teaching corrective exercises. Prerequisite: Graduate standing. (3)

**202. Problems in Physical Education and Recreation**

Survey of the literature, discussion of trends and current problems in physical education and recreation. Observation of school and community activities. Analysis and evaluation of a problem situation. Written reports required. Prerequisite: Graduate standing. (3)

# DIVISION OF LANGUAGES AND LITERATURE

## COMPARATIVE LITERATURE

Requirements for the minor in Comparative and General Literature: (1) a minimum of 15 units of work must be completed in courses offered by the department, at least 9 of which must be in upper division courses; (2) the work to be taken should be arranged in consultation with an instructor selected by the department.

### Lower Division Courses

**52A-52B. Types of World Literature**

For a description of this course, see English 52A-52B.

Year course (3-3)

### Upper Division Courses

**101A. Modern Continental Fiction**

For description, see English 101A.

Spring (3) (Offered in 1946-47 and alternate years)

**104A-104B. Spanish American Literature**

For a description of this course, see Spanish 104A-104B, which may be taken for credit in Comparative Literature by doing the required reading in English translation.

Year course (3-3) (Offered in 1946-47 and alternate years)

**115. The Bible as Literature**

For description, see English 115.

Spring (3) (Offered in 1946-47 and alternate years)

**140A-140B. Masterpieces of French Literature**

A cultural course designed to be given in introduction to the great French works from the Song of Roland through Cyrano de Bergerac, with emphasis on the 16th, 17th, 18th and 19th century authors. The contributions to world thinking of Rabelais, Montaigne, Moliere, Racine, Descartes, Pascal, Montesquieu, Voltaire, Rousseau, Hugo, Balzac, Flaubert, Maupassant, Zola, will be studied through lectures and outside readings.

Year course (3-3) (Offered in 1946-47 and alternate years)

**152A. Survey of Drama: Comedy**

For description, see English 152A.

Fall (3)

**152B. Survey of Drama: Tragedy**

For description, see English 152B.

Spring (3)

**157. Primitive Myths and Rituals**

For description, see Anthropology 157.

Spring (3) (Offered in 1947-48 and alternate years)

## ENGLISH

Lower division preparation for the liberal arts major in English: At least 12 units of work, including 1B, 56A, 56B. Upper division requirements for the liberal arts major: (1) at least 24 units in upper division English courses, including 18 units from the following: 116A, 116B, 117A, 117B, 118A, 118B, 119, 121, 126, 192, 193, 194; (2) selection arrangement of courses under the supervision of an adviser appointed by the English department; (3) a reading knowledge of one of the languages taught in the college: French, German, Italian, Latin, Spanish. (By "reading knowledge" is meant two full years of lower division work, or the equivalent. Further work in one of these languages, in upper division courses, is highly recommended.)

## Lower Division Courses

### 1A. Subject A: English Composition

The elements of composition, including drill in grammar and usage; exercises n vocabulary building and careful reading; theme writing. Credit in this course s equivalent to passing the English A Examination, and admits to English courses numbered from 11 to 16.

Fall and Spring (3)

### 1AA. Reading Efficiency and Vocabulary Extension

Special drill in reading for comprehension; vocabulary building; practice in elementary composition. Systematic, progressive, and intensive training and practice in effective reading and methods of study. This course may be substituted for English 1A.

Fall and Spring (3)

### 1B. Composition

Exposition is stressed. Prerequisite: satisfactory Subject A test. Not open to students who have taken English 1A or 1AA.

Fall and Spring (3)

### 3. English in Business

Theory and practice of business correspondence. Business letters as applied salesmanship; problems in writing credit and collection letters, applications for employment, adjustment letters, and sales letters. Prerequisite: English 1A or equivalent, as indicated by Subject A Examination, or record from college. This course is planned for students in Secretarial Training; units obtained in it can not be used to meet English requirements in other fields.

Fall and Spring (3)

### 10. Recreational Reading

Development of personal tastes for leisure-time reading through lectures and oral or written reports. May be taken a second time with new material.

Fall and Spring (1)

### 11. Freshman Literature—Argumentation

Principles of argument; readings in contemporary deliberation and persuasion; written and oral practice.

Spring (3)

### 12. Freshman Literature—Biography

Composition, stressing personal narrative and informal essay. Reading from field of biography and memoirs.

Fall and Spring (3)

### 13. Freshman Literature—Foundations of the Language

A course designed to make more significant the native language through a study of the elements which have gone into the composition of its vocabulary. Readings from the various periods to illustrate the changes.

Spring (3)

### 14. Freshman Literature—Periodical Literature

Composition stressing article writing of varied types. Reading from current periodical literature.

Fall and Spring (3)

### 15. Freshman Literature—Modern Drama

Composition based upon the reading of recent plays and dramatic criticism. Not a course in dramatics.

Spring (3)

### 16. Freshman Literature—Modern Literature

An introduction to literature of various types in modern European and American culture, with composition.

Fall and Spring (3)

### 50A-50B. Survey of American Literature

Semester I: A survey of American literature from its beginnings to 1860 Semester II: American literature from 1860 to the present. Lectures, discussions and reports.

Year course (3-3)

### 52A-52B. Types of World Literature

A chronological survey from Homer to modern times. The first semester stresses the classical epic and tragedy. The second semester, beginning with the Renaissance, stresses prose fiction, the drama, and the essay.

Year course (3-3)

### 56A-56B. Survey of English Literature

The study of some important works of English literature from the Anglo-Saxon period through the Victorian age, with emphasis upon the literary history of each period.

Year course (3-3)

## Upper Division Courses

### 101A. Modern Continental Fiction

A survey of leading French, Russian, Scandinavian, Italian, and German novelists and short story writers, from Tolstoy and his associates to the present day.

Spring (3) (Offered in 1946-47 and alternate years)

### 101B. Modern British Fiction

The novel and short story, especially of the last quarter of a century.

Spring (3) (Offered in 1947-48 and alternate years)

### 106A-106B. Advanced Composition

A laboratory course in modern prose writing. Semester I: Artistic narrative, with description. The short story. Semester II: The essay, the magazine article, criticism. Outside readings. Prerequisite: One year of college composition. Either semester may be taken first.

Fall, Spring (3-3)

### 110. Recreational Reading

An advanced course in the group reading of modern drama, poetry and fiction.

Fall and Spring (1)

### 115. The English Bible as Literature

A study of the narrative, poetry and prophecy of the King James version of the Bible. Readings, reports, lectures, and discussions.

Spring (3) (Offered in 1946-47 and alternate years)

### 116A. The Age of Elizabeth

Poetry and prose, exclusive of the drama.

Fall (3) (Offered in 1947-48 and alternate years)

### 116B. The Elizabethan Drama

Principal contemporaries of Shakespeare.

Spring (3) (Offered in 1947-48 and alternate years)

### 117A-117B. Shakespeare

A chronological survey. The first semester gives special emphasis to the histories and comedies; the second, to tragedy and the dramatic romances.

Year course (3-3)

**118A. The Age of Swift and Pope**

A study of the literature of the first half of the eighteenth century, with special emphasis on social satire of Swift, Pope, Addison, Steele, Gay and Prior.

Spring (3) (Offered in 1947-48 and alternate years)

**118B. The Age of Johnson**

A study of Johnson and his circle as representative of their age, together with a study of Burns, Blake, and other forerunners of the age of Romanticism.

Spring (3) (Offered in 1946-47 and alternate years)

**119. The Romantic Period: Poetry**

A study of early nineteenth century poetry; the work of Wordsworth, Coleridge, Byron, Shelley, and Keats, in relation to the thought of the revolutionary period.

Fall (3) (Offered in 1947-48 and alternate years)

**121. The Victorian Period: Poetry**

A study of Tennyson and Browning and their contemporaries and successors, relating English poetry to nineteenth century life and thought.

Fall (3) (Offered in 1946-47 and alternate years)

**126. Nineteenth Century British Prose**

Romantic and mid-Victorian prose writers, including Coleridge, Hazlitt, Lamb, DeQuincey, Carlyle, Landor, Macaulay, Mill and Thackeray.

Fall (3) (Offered in 1946-47 and alternate years)

**127. Modern British Prose**

Late nineteenth and early twentieth century essays of Arnold, Galsworthy, Huxley, Newman, Pater, Ruskin, Shaw, Stevenson, Wells and others.

Fall (3) (Offered in 1947-48 and alternate years)

**131. American Literature: 1820-1860**

The study of the important romantic writers, with emphasis on the New England group.

Fall (3)

**132. The Frontier and American Literature**

A survey of the influence of the frontier upon American literature from colonial days to the present. Studies in source materials, biographies, and representative writers such as Cooper, Harte, Mark Twain and Rolvaag.

Fall (3) (Offered in 1946-47 and alternate years)

**133. American Fiction**

The outstanding writers of novels and short stories, from Cooper to Norris.

Spring (3) (Offered in 1946-47 and alternate years)

**134. American Literature: 1900 to the Present**

A survey of American literature since 1900 with emphasis upon contemporary poetry, fiction and drama.

Spring (3)

**143. The English Novel**

History of the English novel from the beginnings to Hardy. Extensive reading of novels with reports, lectures and discussions.

Fall (3) (Offered in 1947-48 and alternate years)

**152A. Survey of Drama: Comedy**

Studies in the field of comedy, based on selected readings from the works of Continental, English and American dramatists. Lectures, discussions, and reports on reading.

Fall (3)

**152B. Survey of Drama: Tragedy**

Procedure as in 152A with selections taken from the field of tragedy.

Spring (3)

**166. Honors Course**

Special study. Open to members of the Honors Group in English (see page 14)

Fall and Spring (1 to 5-1 to 5)

**191. Advanced Composition**

A course in modern prose writing. Emphasis on the narrative and the essay particularly on the problems of effective expression as exhibited in the work of members of the class and as encountered in the work of high school students. Prerequisite one or more college courses in composition. Open only to senior and graduate students.

Spring (3)

**192. The English Language**

An inductive approach to basic aspects of the language. The course includes an analysis of English sounds, grammar and syntax. Modern, Middle and Old English. Open only to senior and graduate students.

Fall (3)

**193. Chaucer**

A study of Chaucer's works, and a consideration of the social and literary backgrounds of the fourteenth century. Open only to senior and graduate students.

Fall (3)

**194. The Age of Milton**

A study of the literary developments of the middle and later seventeenth century, with emphasis on the work of Milton. Open only to senior and graduate students.

Spring (3) (Offered in 1947-48 and alternate years)

**195. Literary Criticism**

A historical survey of the principles and practices of literary criticism from Greek times to the nineteenth century. Readings in the works of Aristotle, Horace, Longinus, Sidney, Boileau, Dryden, Lessing, Sainte-Beuve, Coleridge and Arnold. Open only to senior and graduate students.

Fall (3)

**196. The Forms of Poetry**

Foundation materials for the appreciation of poetry, including critical concepts of the nature of the art; metrical theory; history of the leading poetic types; and the relation of poetic forms to thought, mood and environment. Open only to senior and graduate students.

Spring (3)

**199. Research: Advanced Honors Course**

Special study. Open to mature, specially qualified students, graduates, teachers of English literature, and others who have demonstrated marked aptitude for intensive research in the field of English literature.

Fall and Spring (3-5)

**Comparative Literature**

For other courses in literature, offered by members of the English Department and other departments, see Comparative Literature, page 68.

**201. Shakespeare**

A seminar on the graduate level: bibliography, critical study, special problems, criticism. Prerequisite: graduate standing. Recommended: at least one undergraduate course in Shakespeare.

Spring (3)

**221. Regionalism in American Literature**

A seminar on the graduate level: bibliography, special problems, with concentration on selected regions. Prerequisite: graduate standing. Recommended: at least one undergraduate course in American literature.

Fall (3)

## FOREIGN LANGUAGES

The courses offered in foreign languages are listed below. See pages listed after each subject for a more complete description of the offerings under that designation. French, see below; General Language, page 74; German, page 74; Italian, page 75; Latin, page 75; and Spanish, page 75.

As a background for advanced work in Romance languages, students are advised to include in their electives as many as possible of the following courses: Geography 118; History 121A, 121B, 143, 147; Aesthetics 50 or 150; English 52A, 52B, 56A, 56B, 101, 112, 116, 118A, 119, 126, 143, 152.

## FRENCH

Lower division preparation for the liberal arts major in French: French A-B-C-D; either German A-B or Spanish A-B; History 4A-4B.

Liberal arts major in French: Twenty-four units of upper division work, of which at least eighteen must be in French, and of which a maximum of six may be in related subjects, arranged in consultation with the chairman of the department. At least a C average in upper division major courses.

### Lower Division Courses

**A-B. Elementary**

Intensive study of French grammar and syntax; daily written work discussed in class; class drill in conversational idiom and pronunciation; reading with oral discussion and résumés; dictation; introduction to contemporary prose writers. Credit not given for French A unless followed by French B. Students who have had one year of French in high school should register for two units of work in French A. Those who have had two years of French in high school should register for four units of work in French B.

Year course (5-5)

**C-D. Intermediate Reading**

Reading and composition; study of standard prose as a basis for class work, collateral reading with résumés and written reports in French; dictation. Individual conferences. Prerequisite: French B or three years of high school French, or its equivalent. Students with four years of high school French should register for French D.

Year course (3-3)

**SC. Scientific Reading**

Reading taken from the fields of chemistry, physics, medicine, zoology, biology, etc. Outside readings of books and periodicals. Oral and written reports. Prerequisite: French B or equivalent.

Fall (2) (Offered in 1946-47 if demand is sufficient)

### Upper Division Courses

**101A-101B. Conversation and Composition**

Prerequisite: French D, or its equivalent, with grade of C.

Year course (3-3)

**105A-105B. Modern French Drama**

Plays of Mussett, Scribe, Augier, Dumas fils, Pailleron, Brieux, Hervieux, Maeterlinck, Rostand, and others read and discussed as to subject matter and technique. Outside reading and reports. Prerequisite: French D, or its equivalent, with grade of C.

Year course (3-3) (Offered in 1949-50)

### 107A-107B. Eighteenth Century Literature

The works of Montesquieu, Voltaire, Rousseau, the Encyclopédistes, and others. Prerequisite: French D, or its equivalent, with a grade of C.

Year course (3-3) (Offered in 1948-49)

### 110A-110B. Modern French Novel

The French novel from Victor Hugo to the present day, including such authors as: Hugo, Dumas, Stendhal, Balzac, Flaubert, Loti, Anatole France, Bourget, Bordeaux, Bazin, Barrès, Romain Rolland, A. Gide, Marcel Proust, and others. Class and outside reading and reports. Prerequisite: French D, or its equivalent, with Grade of C.

Year course (3-3) (Offered in 1947-48)

### 111A-111B. Seventeenth Century Dramatic Literature

Reading in class of plays of Molière, Corneille, and Racine. Outside readings and lectures on the background of the seventeenth century in France. Prerequisite: French D or its equivalent, with a grade of C.

Year course (3-3)

### 199. Comprehensive Reading and Survey Course

Designed to fill up the gaps in the reading done in courses. Class meeting once a week for guidance, reports, and quizzes. Required of all seniors majoring in French.

Spring (3)

## GENERAL LANGUAGE

### Lower Division Course

### A. Latin and Greek Word Derivation

A general and elementary course in philology. A study of Latin and Greek roots of most frequent occurrence in English, and of the English words derived from them.

Fall (2)

## GERMAN

### Lower Division Courses

### A-B. Elementary

Pronunciation, reading and grammar, with practice in simple conversation, narration and description, both oral and written. Credit not given for German A unless followed by German B. Students who have had one year of German in high school should register for two units of work in German A. Those who have had two years of German in high school should register for four units of work in German B.

Year course (5-5)

### C-D. Intermediate Review and Reading

Reading and composition; study of standard prose as basis for class work; collateral reading with written reports; German conversation, with the texts read as a basis; dictation. Prerequisite: German B or two years of high school German, or its equivalent. Students with credit for three years high school German, or its equivalent, should enter German C.

Year course (3-3)

### SC-SD. Scientific Reading

Fall semester. Readings in scientific reader on chemistry, physics, etc.; occasional written reports on scientific subjects read outside of class; sight reading. Spring semester. Readings in special scientific or technical works; weekly written reports required; sight reading. Prerequisite: German SC-German B with a grade of C or two years of high school German; German SD-German SC, German C, with a grade of C, or three years of high school German.

Year course (3-3) (Not offered in 1946-47)

## ITALIAN

**A-B. Elementary**

Intensive study of Italian grammar and syntax, with daily written work; class drill in conversational idiom and pronunciation; reading of works by contemporary writers. Credit not given for Italian A unless followed by Italian B. Students who have had one year of Italian in high school should register for Italian A. Those having two years in high school should register for Italian B.

Year course (5-5)

## LATIN

**C-D. Intermediate**

Readings from Latin writers. First semester: Caesar. Second semester: Cicero and Ovid. Prerequisite: Two years of high school Latin or the equivalent.

Year course (3-3) (Not offered in 1946-47)

## SPANISH

Lower division preparation for the liberal arts major in Spanish: Spanish A-B-C-D; French A-B; History 4A-4B or 8A-8B.

Liberal arts major in Spanish: Twenty-four units of upper division work, of which at least eighteen must be in Spanish, and of which a maximum of six may be in related subjects, arranged in consultation with the chairman of the department. At least a C average in upper division major courses.

### Lower Division Courses

**A-B. Elementary**

Intensive study of Spanish grammar and syntax, with daily written work; class drill in conversational idiom and pronunciation; reading with oral discussion and résumés; dictation; introduction to contemporary prose writers. Credit not given for Spanish A unless followed by Spanish B. Students who have had one year of Spanish in high school should register for two units of work in Spanish A. Those who have had two years of Spanish in high school should register for four units of work in Spanish B.

Year course (5-5)

**C-D. Intermediate Spanish**

Reading and composition: study of standard prose as basis for class work; collateral reading in prose and drama, with written reports in Spanish; dictation. Class work conducted mainly in Spanish. Individual conferences. Prerequisite: Spanish B or three years of high school Spanish, or its equivalent. Students with credit for four years of high school Spanish, or its equivalent, should enter Spanish D.

Year course (3-3)

**50. Spanish Commercial Correspondence**

A one-semester intermediate course in Spanish composition, directed along the line of commercial correspondence. A practical course, with translation of real business letters, and supplementary reading in Spanish on commercial subjects. Prerequisite: three years of high school Spanish, or completion of Spanish B. This course may substitute for Spanish C in the C-D sequence.

Fall (3)

### Upper Division Courses

**101A-101B. Conversation and Composition**

Prerequisite: Spanish D, or its equivalent, with grade of C.
Year course (3-3) (Offered 1947-48)

**102A-102B. Introduction to Spanish Classics**

Reading from several types of classical literature. Lazarillo de Tormes and other novels of Roguery; selections from Don Quixote, and the Cien Mejores Poesias Castellanas; one drama each from the works of Lope de Vega, Calderon, Alarcon, and Moreto; collateral reading and reports. Prerequisite: A grade of C in Spanish D or permission from the instructor.

Year course (3-3)

**104A-104B. Spanish-American Literature**

Reading from representative Spanish-American authors during the colonial, revolutionary and modern periods. Lectures, class reading, collateral reading and reports. Prerequisite: A grade of C in Spanish D or permission from the instructor. Students who do not read Spanish may take this course for credit in comparative literature, doing the required reading in English translation.

Year course (3-3) (Offered in 1946-47)

**105A-105B. Modern Spanish Drama**

The development of the drama of Spain from the beginning of the nineteenth century to the present time. Prerequisite: A grade of C in Spanish D or permission from the instructor.

Year course (3-3) (Offered in 1947-48)

**110A-110B. Novel and Short Story in Spain**

The development of the novel and short story in Spain from 1830 to the present time. Prerequisite: A grade of C in Spanish D or permission from the instructor.

Year course (3-3) (Offered in 1949-50)

**199. Comprehensive Reading and Survey Course**

Designed to fill up the gaps in the reading done in courses. Class meeting once a week for guidance, reports, and quizzes. Required of all seniors majoring in Spanish.

Spring (3)

## JOURNALISM

### Lower Division Courses

**51A-51B News Gathering and Reporting**

Study of news sources and types; practice in news and feature writing; newspaper organization; excursions and special lectures. Course planned for freshmen as a prerequisite to positions on all college publications.

Year course (3-3)

**53A-53B Applied Journalism**

Practice and projects in reporting news and feature stories and in other editorial work on *The Aztec, El Palenque, Del Sudoeste.*

Fall and Spring (1 to 3; 1 to 3)

## SPEECH ARTS

Lower division preparation of the Liberal Arts major in Speech Arts: At least 18 units of lower division courses in Speech Arts, including 1A, 1B, and six units chosen from 55A, 55B, 55C, 55D. Recommended: Aesthetics 1A, 1B, 50; Art 52A, 94.

Upper division requirements for the Liberal Arts major in Speech Arts: At least 18 units in upper division courses in Speech Arts, including 150, 163A, and six units from 155, 156A, 156B, 193. Also required: six units from English 117A, 117B, 152A, 152B, 192. Recommended: English 110, 116B; French 105A, 105B; Physical Education 164A, 164B; Spanish 105A.

Candidates for the teaching credentials in Speech Arts should refer to "Admission to Teacher Education Curricula" on page 21 or to the note regarding the Special Credential in Speech Arts on page 32.

### Lower Division Courses

**1A. Fundamentals of Public Speaking**

Training in fundamental processes of oral expression; method of obtaining and organizing material; outlining principles of attention and delivery; extemporaneous speaking and open forum debating; practice in construction and delivery of type forms of speech.

Fall and Spring (3)

**1B. Extemporaneous Speaking (or Forum Speaking)**

Practice in extemporaneous speaking on subjects of current interest both national and local, with stress laid on the organization and delivery of content material. Forum discussion will provide speakers with the opportunity of assembling facts quickly to meet such questions as any audience situation might demand.

Fall and Spring (3)

**1C. Oral Interpretation**

The oral interpretation of longer literary selections, both in poetry and prose; a fundamentals course designed for the beginning students in drama as well as those majoring in English literature.

Fall and Spring (3)

**1D. Advanced Interpretation**

Emphasis placed on stage poise and grace with adequate attention given to variations in the presentation of literary selections. Much opportunity is provided for individual and group creative work. No prerequisite. Class limited.

Spring (3)

**20. Corrective Speech**

Corrective laboratory training prescribed on the basis of vocalization tests made on Electro-Vox Recording Machine. Required of education majors who fail to meet speech requirements test. Private clinical assistance given to stutterers and lispers.

Fall and Spring (1) (9 weeks' course)

**55A-55B. Dramatic Production**

A course for first and second year students in which, through participation, they acquire an understanding of certain dramatic periods and types studied in English literature. Individual and group expression coordinated and developed in production of scenes, acts, and plays—a fundamental drama course emphasizing modern trends. No prerequisite.

Year course (3-3) (Offered in 1947-48 and alternate years)

**55C-55D. Dramatic Expression**

A course to help students realize and develop their creative abilities for expressing life and character through acting and writing. History, technique and theory of various dramatic forms studied, created and presented through workshop methods. A fundamental course planned for students desiring specialized training in drama or writing. Prerequisite: Consent of instructor.

Year course (3-3) (Offered in 1946-47 and alternate years)

**57A-57B. Radio Production**

Designed to present the background, theory and fundamentals of broadcasting. A basic course for radio speaking and writing.

Year course (2-2)

**60. Argumentation and Debate**

Obtaining and organizing of evidence and the construction and use of the brief; study and discussion of current issues; the presentation of formal and informal debates. Attention to intramural and intercollegiate debating.

Spring (3)

**61A-61B-61C-61D. Intercollegiate Debate**

Year course, each year (1)

**63A-63B-63C-63D. Verse Choir**

Participation in verse speaking chorus to develop quality, range of tone, and ability in dramatic visualization of poetry. Required for speech arts credential.

Fall and Spring (1-1)

## Upper Division Courses

### 108. Art of Interpretation

Analysis of various types of literature. Material chosen will emphasize the finer techniques of oral expression to develop the imagination, the emotional power reading skill and platform deportment in its varied phases. Prerequisite: one yea of college speech or equivalent.

Spring (3)

### 110. Recreational Reading

For description, see English 110.

Fall and Spring (1)

### 116B. The Elizabethan Drama

For description, see English 116B.

Spring (3) (Offered in 1947-48 and alternate years)

### 117A-117B. Shakespeare

For description, see English 117A-117B.

Year course (3-3)

### 150. Phonetics

Auditory and kinaesthetic analysis of the sounds of the English language Valuable as a corrective course in pronunciation and articulation. Required o speech majors and those seeking the Speech Correction Credential.

Fall (3)

### 152A. Survey of Drama: Comedy

For description, see English 152A.

Fall (3)

### 152B. Survey of Drama: Tragedy

For description, see English 152B.

Spring (3)

### 155. Advanced Dramatic Expression

For upper division students training for leadership in different fields as well as drama. More advanced forms of dramatic expression studied; creative abilities in interpretation, writing, acting, and stagecraft developed in relation to various subjects and activities conducted through individual research projects, group discussion and participation. Original work encouraged. Prerequisite: A fundamental drama course.

Spring (3) (Offered in 1947-48 and alternate years)

### 156A-156B. Advanced Dramatic Production

The study of more difficult dramatic types and periods in the production o poetic and prose literature of different countries. Arrangement, organization, creation, direction and presentation of classroom, recreational and other forms of performances. Practical participation and demonstration. A course designed for students majoring in other subjects as well as the theater arts.

Year course (3-3) (Offered in 1946-47 and alternate years)

### 157A-157B. Advanced Radio Production

Preparation and production of radio plays and various types of radio material

Year course (3-3) (Offered in 1946-47 and alternate years)

### 158. Advanced Radio Techniques

Designed to enable experienced students to specialize in different fields of the radio. Special attention given to original preparation and production of various types of radio material including plays, transcriptions, etc. Permission of instructor necessary for registration.

Fall (3) (Offered in 1947-48 and alternate years)

**163. Rhythm, Pantomime and Choric Verse**

A course combining bodily movement with group speaking. Presents the fundamentals of rhythm and pantomime in different forms of dramatic expression.

Spring (3) (Offered in 1947-48 and alternate years)

**175. Major Speech Disorders**

Clinical survey of newest methods of speech correction with special emphasis given to stammering and cleft-palate speech. One of required courses for Special Corrective Credential.

Spring (3)

**191. Organized Discussion**

Consideration of the symposium, the panel, the open forum, the business session, and varieties of conference speaking. Emphasis upon organization and presentation. Attention to parliamentary procedure for informal groups. Open only to senior and graduate students.

Fall (3)

**192. The English Language**

For description, see English 192.

Fall (3)

**193. Advanced Dramatic Interpretation**

A more advanced treatment of the types of work included in Speech Arts 155. Prerequisite: A fundamental course in drama. Open only to senior and graduate students.

Fall (3)

**194. Advanced Radio Techniques**

Preparation and production of radio drama and different types of continuity. Experience at professional studios. Emphasis upon radio in education. Broadcasting. Open only to senior and graduate students.

Spring (3)

**201. Advanced Rhythm, Pantomime and Choric Verse**

History and appreciation of their use in drama, modern applications including motion picture, radio and television. Demonstrations. Prerequisite: graduate standing.

Spring (3)

**221. Articulatory Problems of Speech**

Analysis and discussion of articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Prerequisite: graduate standing and Speech Arts 150.

Fall (3)

# DIVISION OF LIFE SCIENCES

## BIOLOGICAL SCIENCES

The courses offered in Biological Sciences are listed below. Anatomy, see Zoology, page 81; Physiology, page 81; and Zoology, page 81.

## BACTERIOLOGY

### Lower Division Courses

**1. General Bacteriology**

An introduction to bacteriology. Effects of physical and chemical agencies upon bacteria; biochemical activities of bacteria; microscopic examination and cultivation of bacteria; the bacteria of air, water, soil, milk and dairy products, other foods; industrial applications. Introduction to disease-producing bacteria. Required of pre-nursing students. Two hours of lecture and six hours of laboratory per week. Prerequisite: Chemistry 1A or 2A.

Fall (4)

**199. Special Problems**

Work other than is outlined in the regular courses. Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least fifteen units of work in the department (including courses in Bacteriology and Chemistry) with grades of A or B.

Fall or Spring (1 or 2)

## BIOLOGY

### Lower Division Courses

**1. Survey of Biology**

A survey of life science, stressing the development of modern concepts in the fields of plant and animal science, bacteriology, genetics, and physiology. Emphasis is placed on the relationships of biology to modern life and the application of scientific analysis to every day problems. Three lectures and one hour of demonstration and discussion per week. Not open to students with credit for Biology 10A-10B, Zoology 1A-1B, or Botany 2A-2B.

Fall (3)

**10A-10B. General Biology**

A year course in life science, more extensive than "Biology 1." Continues throughout the year and includes a three-hour laboratory period, and two hours of lectures per week. Designed for those who do not expect to specialize in zoology or botany; not open for credit to students who have taken Zoology 1A, Biology 1, or Botany 2A. Students who have taken 10A-10B may elect Zoology 1B or Botany 2A, 2B for credit.

Year course (3-3) Begins in Fall only

**A. Mathematics of Solutions and Dosage**

Arithmetic review with computing of dosage, percentage of solutions, apothecaries weights and graph making. Two hours per week.

Fall (2)

## BOTANY

Lower division preparation for advanced work in botany: Botany 2A, 2B, 4, and Chemistry 1A, 1B, 8. Recommended: German, French, and elementary courses in other biological sciences.

### Lower Division Courses

**2A. General Botany**

Fundamentals of structure and general behavior of seed plants. Two lectures or recitations and six hours of laboratory per week.

Fall (4)

**2B. General Botany**

A continuation of 2A treating morphology and relationship of the lower plants nd including an introduction to classification of seed plants. Lectures and laboratory s in 2A.

Spring (4)

**4. California Plants**

Classification and ecology of representative orders of wild flowers, trees, and chaparral of the San Diego region, including practice in the use of keys. One lecture nd three hours laboratory per week. Occasional Saturday field trips.

Spring (2)

**5. Cultivated Trees and Shrubs**

Recognition of the common cultivated trees and shrubs of the San Diego region. Trips to local parks and private gardens. Three hours per week laboratory or field work.

Fall (1) (Not offered in 1946-47)

### Upper Division Courses

**102. Plant Geography**

Lectures and field work on the principles of geographical distribution of plants. Prerequisite: Botany 2A-2B, or 4, or equivalent.

Fall (2) (Offered in 1945-46 and alternate years)

**104. Plant Taxonomy**

Identification, classification and distribution of representative orders of flowering plants. One hour of lecture and six hours per week of laboratory and field work. Prerequisites: Botany 2A-2B, or 4.

Spring (3) (Offered in 1945-46 and alternate years)

**199. Special Problems**

Work other than is outlined in the above courses. Admission by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open only to students who have completed at least fifteen units of Botany with a grade of A or B.

Fall and Spring (1 or 2)

## PHYSIOLOGY

### Lower Division Courses

**1A. Human Physiology**

A lecture course considering the functions of the human body. Prerequisites: Elementary chemistry and high school or college biology or zoology. Three hours of lecture per week. Credit reduced to 2 units, for students having credit for Zoology 20.

Spring (3)

**1C. Human Physiology**

A study of the human functions through laboratory experiments and demonstrations. Prerequisites: Physiology 1A completed or in progress. Six hours of laboratory per week.

Spring (2)

## ZOOLOGY

Lower division preparation for the liberal arts major in zoology: Zoology 1A, 1B, and high school chemistry, Chemistry 1A-1B or 2A-2B. Recommended: German or French, Botany 2A, 2B, 4.

Liberal arts major in zoology: (1) At least a C average in upper division major courses. (2) Twenty-four units of upper division courses in zoology or eighteen in the major subject and six in related courses in botany, chemistry, physics, physiology or bacteriology.

Students preparing to teach science in the junior high school should try to include courses in zoology, botany, physiology, bacteriology, physics, chemistry (at least high school chemistry). Courses designed to help the student get acquainted with wild life of the region should be included. Recommended: Botany 4, 104, 102; Zoology 112, 113A, 113B, 121.

## Lower Division Courses

### 1A. General Zoology

An introduction to animal biology dealing with structure, functions, and evolution of animal life. Laboratory work supplementing the lectures and based on the study and observation of living and preserved material. Valuable to the general student as well as to the biology specialist, acquainting him with the fundamental facts and theories of biology as they pertain to animal life. Two lectures and six hours of laboratory per week. Students who have credit for Biology 10A-10B receive no credit for Zoology 1A but receive credit for Zoology 1B.

Fall (4)

### 1B. General Zoology

A continuation of 1A. The structure, relationships, and classification of the chordates. Two lectures and six hours of laboratory per week. Prerequisite: Zoology 1A or Biology 10B.

Spring (4)

### 4. Microtechnique

Introduction to methods of preparation of tissues for microscopic study. Six hours of laboratory per week and one hour of lecture. Prerequisite: elementary chemistry and biology.

Spring (3)

### 8. Human Anatomy

A study of human structure through the use of models, prepared dissections and microscope slides. Prerequisite: high school biology, Biology 10A, 1, or Zoology 1A. Two hours of lecture and three hours of laboratory per week. Required of prenursing students. Credit reduced to 2 units if student has credit for Zoology 20.

Fall (3)

### 20. Human Anatomy and Physiology

An elementary course in human anatomy and physiology. Prerequisite: High school biology, or Biology 1 or 10A or Zoology 1A. Lectures three hours per week. Credit reduced to 2 units if student has credit for Zoology 8 or Physiology 1A.

Fall and Spring (3)

## Upper Division Courses

### 100. Embryology

The development of vertebrates as illustrated by the frog, chick, and pig. Three hours of laboratory and three hours of lecture and quiz per week. Prerequisite: Zoology 1B or Biology 10B.

Spring (4)

### 104. Microtechnique

Introduction to methods of preparation of tissues for microscopic study. Six hours of laboratory and one hour of lecture per week. Prerequisite: elementary chemistry and biology.

Spring (1)

### 106. Comparative Anatomy of the Vertebrates

Dissection, study and comparison of organ systems of typical vertebrates. Two hours per week of lecture and six hours of laboratory. Prerequisite: Zoology 1B or Biology 10B.

Fall (4)

**08. Human Anatomy**

Lectures and laboratory work of Human Anatomy 8 with an additional hour of eminar each week. Open only to upper division students by special arrangement.

Fall (3)

**12. Marine Invertebrates**

Identification and study of behavior and life histories of invertebrates of the San Diego region. Frequent collecting trips to the beaches required. Prerequisite: Zoology 1A or Biology 10B. One hour of lecture and six hours of laboratory or field work per week.

Fall (3)

**113A. Taxonomy and Natural History of the Mammals**

Frequent field trips and the identification of museum material. Three hours of aboratory per week.

Spring (1)

**113B. Ornithology**

The study and identification of birds, especially those of the Pacific Coast and the San Diego region. One hour of lecture and six hours per week of laboratory, or field excursions. Prerequisite: Zoology 1B or Biology 10B.

Spring (3)

**114A. Genetics**

General introductory course designed to acquaint the student with the fundamental principles of heredity and variation. Special attention given to the Mendelian interpretations of the facts of inheritance. Two lectures per week.

Fall (2)

**114B. Evolution**

The development of theories of evolution. Two lectures or discussion periods per week.

Spring (2)

**121. General Entomology**

The classification, life history, structure, and physiology of insects. Prerequisite: Zoology 1A or Biology 10B. Two hours of lecture and six hours of laboratory per week.

Spring (3)

**122. Systematic Entomology**

Classification of insects with especial emphasis on a group of insects of the student's choice. •To be taken with or to follow 121. May be repeated for credit but with a total of not more than 3 units. Three to six hours of laboratory work each week.

Spring (1 or 2)

**123. Economic Biology**

Study of the uses of plants and animals to man and the ways in which they injure him and his possessions. Consideration is also given to general methods of control and conservation. Prerequisite: Zoology 1A, Biology 1, or Biology 10B.

Fall (2)

**124. Scientific Illustration**

Instruction and practice in various methods used to illustrate scientific publications. Recommended course in preparation for this one: Art A-B.

Fall (2)

### 126. Medical Entomology

The role of insects and other arthropods in transmission and causation of huma diseases. Three hours of laboratory and two hours of lecture per week. Prerequisite Zoology 1A or Biology 10B.

Fall (3)

### 130. Readings in Biology

Reading from a suggested bibliography with informal class discussion of topics Subjects discussed will include history of biology, biological principles, ecology economic zoology, zoogeography, breeding habits, animal behavior.

Spring (2)

### 199. Special Study

Work other than is outlined in the above courses. Admission only by consent o the instructor with whom the work is to be done. Credit and hours to be arranged i each case. Open to students who have completed at least fifteen units of Zoolog with a grade of A or B.

Fall and Spring (1 or 2)

# DIVISION OF PHYSICAL SCIENCES

## ASTRONOMY

Lower division preparation in Astronomy desirable for advanced work: stronomy 1, 2, 3, and 9; Mathematics 3A-3B, 4A-4B; Physics 1A-1B and 1C-1D; a eading knowledge of French and German desirable.

### Lower Division Courses

**. Descriptive Astronomy**

A cultural course planned to develop an appreciation of astronomy with special mphasis on the solar system. Only calculations of an elementary nature are used. Especial attention given to the methods and instruments by means of which astronomi-al knowledge has been gained. A six-inch John Byrne refractor and an eight-inch eflecting telescope are available for observation. Prerequisites: Elementary algebra and plane geometry.

Fall and Spring (3)

**. Modern Astronomy**

A study of sidereal astronomy and astrophysics in the light of modern research, specially photographic and spectrographic. Prerequisite: Astronomy 1 and a knowl-dge of physics or permission of the instructor.

Spring (3)

**. Surveyor's Course in Practical Astronomy**

The principles of spherical astronomy adapted to the needs of engineering tudents. Computation and observation. Prerequisite: Surveying 1A or permission of the instructor. Astronomy 1 and 9 desirable.

Spring (2)

**. Practice in Observing**

A laboratory course designed particularly to go along with and to supplement Astronomy 1. The course will include constellation study, use of astronomical coordinates, elementary methods of determining time and latitude, and descriptive observations of celestial objects with the six-inch telescope. Prerequisite: Astronomy 1 or registration in Astronomy 1 or permission of the instructor.

Fall or Spring (1)

**12. Elementary Navigation**

A study of compass corrections, drift problems, time, line of position, use of celestial coordinates, Bowditch Tables, etc. A few class hours at the close of the term are devoted to the use of tables such as Ageton, Dreisonstok and H. O. 214 for the solution of astronomical triangle. Offered if demand is sufficient. Prerequisite: Astronomy 1 or permission of instructor.

Fall (2)

### Upper Division Courses

**100. Special Problems**

Admission by consent of instructor. Credit and hours to be arranged in each case. Open to students who have completed three units in astronomy.

Fall and Spring (1 or 2)

**105. Historic Development of Astronomy**

A study of the more important problems and astronomical concepts in the light of their historical development. Particular attention is given to the biography and contributions of the more important astronomers, such as, Galileo, Kepler, Newton, Herschel, and Bessel.

Spring (3)

**107. Method of Least Squares and Computing Practices**

Fundamental principles and processes and applications in the fields of astronomy, physics, and engineering.

Spring (3) (Not offered in 1946-47)

## CHEMISTRY

Lower division preparation for the liberal arts major in chemistry: Chemist 1A-1B with an average grade of C or better, Chemistry 7-8, Physics 2A-2B and 3A-3 or their equivalent, Mathematics 3A-3B or the equivalent, and a reading knowledge German. Students planning to do graduate work in chemistry or to transfer to certai other colleges and there work for a degree with a major in chemistry, are advised to ta Physics 1A-1B-1C-1D and Mathematics 3A-3B-4A-4B in place of the courses list above.

Liberal arts major (upper division): A minimum of twenty-four upper divisio units in chemistry including Chemistry 105A-105B, 110A-110B and 111A-111B. T choice of related minors and the organization of the course of the major student mu follow a definite plan approved by the department.

For requirements for liberal arts major in physical science, see page 92.

### Lower Division Courses

**1A-1B. General Chemistry**

The general principles and laws of chemistry, and a description of the elemen and their compounds. Two lectures, one quiz and two laboratory periods per wee The laboratory work in the second semester consists of work in qualitative analysi Prerequisites: At least two years of high school mathematics. Recommended: Hig school chemistry and physics.

Year course (5-5)

**2A-2B. General Chemistry**

A general course for those not intending to take advanced courses in chemistr The work in the first semester stresses inorganic chemistry and fundamental pri ciples; that of the second semester covers an introduction to organic and biochemistr Emphasis placed on applications of chemistry to everyday life. Two lectures and o laboratory period per week. Required of pre-nursing students and recommended f those desiring chemistry as part of a liberal education.

Year course (3-3)

**7-8. Organic Chemistry**

A general consideration of the carbon compounds (both aliphatic and aromati and their derivatives; their synthesis constitution, and properties, and the principl involved. Two lectures and one laboratory period per week first semester; one lectu and two laboratory periods per week second semester. Prerequisite: Chemistry 1A-1

Year course (3-3)

### Upper Division Courses

**105A. Quantitative Analysis**

The principles of gravimetric and volumetric analysis. Discussions of the theo of quantitative analysis and practice in the standardization of reagents and analys of samples. One lecture and two laboratory periods per week. Prerequisite: Che istry 1A-1B.

Fall (3)

**105B. Advanced Quantitative Analysis**

Advanced work in the theory and practice of volumetric, gravimetric a electroanalysis. One lecture and two laboratory periods per week. Prerequisit Chemistry 105A.

Spring (3)

**110A-110B. Physical Chemistry**

Lectures and problems on theoretical principles of chemistry. Prerequisite Physics 1A-1B or 2A-2B, a knowledge of calculus and Chemistry 105A which m be taken concurrently. With the approval of the instructor, advanced courses physics may be substituted for Chemistry 105A.

Year course (3-3)

**1A-111B. Physical Chemistry—Laboratory**

Physico-chemical problems and measurements. Two laboratory periods per ek. Prerequisites: Credit or registration in Chemistry 110A-110B.

Year course (2-2)

**2A-112B. Industrial Analysis**

A laboratory course including the analysis of fuels, petroleum products, water, d gas. Prerequisite: Chemistry 105A which may be taken concurrently. (3-3)

**4. Biochemistry**

An introductory lecture course covering the carbohydrates, proteins, fats and e changes which they undergo in digestion and metabolism as well as a consideration the vitamins and other accessory food factors and their importance to the body. brief discussion of the chemistry of plant life. Prerequisites: Credit or registration Chemistry 7, 8.

Spring (3) (Offered in 1947-48 and alternate years)

**8. Colloid Chemistry**

A lecture course covering the theoretical principles of colloid chemistry and the eparation, properties and practical applications of colloids. Prerequisite: Chemtry 7-8.

Fall (2) (Offered in 1946-47 and alternate years)

**23-124. Organic Preparations**

A laboratory course illustrating some of the more important synthetic methods organic chemistry. Laboratory and conferences. Prerequisite: Chemistry 7-8. reading knowledge of German recommended.

Beginning either Fall or Spring (1 to 5—1 to 5)

**25. History of Chemistry**

Development of the science of chemistry from the time of the alchemists to the resent. Conducted on the reading, report, and seminar basis. Prerequisite: Chemtry 7, 8.

Fall (2) (Not offered in 1946-47)

**27. Advanced Inorganic Chemistry**

A detailed study of the Periodic Table. Discussion of complex inorganic comounds and oxidation-reduction potentials. Prerequisite: Chemistry 1A-1B and upper ivision standing.

Fall (2) (Offered in 1946-47 and alternate years)

**44. Industrial Chemistry**

Industrial stoichiometry, flow sheets, flow of fluids and unit processes. Lecures, problems, and reports. Prerequisites: Chemistry 1A-1B, Physics 1A-1B or A-2B.

Spring (3)

**99. Special Problems**

Supervised individual work in specialized branches of chemistry. Admission nly by the consent of the instructor. Hours and credit to be arranged in each case. nly open to upper division students who have shown their ability to do A or B ork in Chemistry.

Fall and Spring (1-3)

## ENGINEERING

(For curriculum in engineering see pages 36-37)

### Lower Division Courses

**1A-1B. Plane Surveying**

Use and adjustment of surveying instruments, computations and map-making, together with a study of land, topographic, city, and mine surveying. Two instruction periods and one three-hour period for field work and mapping each week. Prerequisites: Trigonometry and Mechanical Drawing, or equivalent, and sophomore standing.

Year course (3-3)

### S3. Summer Class in Surveying

Practical field problems in reconnaissance, triangulation, location and topographic surveys. Observations for meridian, time and latitude. Precise work in linear and angular measurements. Development of self-reliance, accuracy, and professional skill on the part of the student. Four weeks course held in the mountains near San Diego. For details regarding location of camp, date of registration, date of opening, and other arrangements, a special announcement of the surveying camp may be secured at the Registrar's Office. Offered if demand is sufficient. Prerequisite: Surveying 1A-1B.

Summer (3)

### 21. Descriptive Geometry

Fundamental principles of descriptive geometry and their application to problems of engineering. Lectures and drafting. Prerequisites: One year of mechanical drawing, and sophomore standing.

Fall (3)

### 22. Machine Drawing

Design and drawing of simple machine parts with emphasis upon the production of standard drawings. Lectures and drafting. Prerequisite: Engineering 21, Mathematics 3A-3B.

Spring (3)

### 23. Materials of Construction

Manufacturing processes, structural properties and adaptability of the principal materials used in engineering. Lectures; Prerequisite: Sophomore standing.

Spring (2)

## Upper Division Courses

### 100A-100B. Elements of Electrical Engineering

Theory and characteristics of electrical equipment with emphasis on industrial applications.

**100A. Direct current circuits, generators and motors.** Introduction to alternating current circuits.

**100B. Alternating current circuits, transformers, alternators, induction on synchronous motors, conversion apparatus and transmission lines.**

Lectures and problems. Prerequisites: Mathematics 4A, Physics 1C or permission of the instructor.

Year course (3-3) (Offered in 1947-48 and alternate years)

### 105. Hydraulics

A general course in hydraulics including the fundamental principles of hydrostatics and hydrodynamics applied to the flow of water through orifices, over weirs, through pipes and canals. Lectures and problems. Prerequisites: Mathematics 4A, Physics 1C. Recommended: Physics 105A-105B.

Spring (3) (Offered 1946-47 and alternate years)

### 123. Materials of Construction

Essentially the same as Engineering 23 except that students will be expected to investigate more fully some particular material or process and prepare a written report upon it. Prerequisites: Chemistry 1B, Junior standing.

Spring (2)

### 128. Elements of Heat Power Engineering

Fundamental consideration of fuels, combustion, steam, boilers, furnaces, chimneys, steam engines, steam turbines and auxiliaries, internal combustion engines. Lectures and Problems. Prerequisites: Mathematics 4A, Physics 1B.

Fall (3) (Offered 1946-47 and alternate years)

## GEOLOGY

Department requirement in Geology for liberal arts major in Physical Science includes in addition to Geology 1A-1B, the completion of: Chemistry 1A-1B, Physics 1A-1B-1C-1D or 2A-2B; 3A-3B. Students preparing for advanced work in Geology may add Engineering 21 and Geology 21A. Geology 2A may be substituted for Geology 1A in department prerequisite requirements provided the additional necessary unit of laboratory work is completed.

French or German, Engineering 1A-1B and Geology 21A-21B are recommended.

### Lower Division Courses

**1A. Physical**

The composition, origin, and distribution of earth materials, and their modification through mechanical and chemical process of change. Three lectures and one three-hour laboratory period weekly with related field study during the semester. (Not open to students who have had Geology 2A except for one unit upon the completion of the laboratory section.)

Fall (4)

**1B. Historical**

Theories of earth origin, and the evolutionary history of the earth as traced through rock and fossil records. Consideration of the Paleontologic Sequence. Three lectures and one three-hour laboratory period weekly, with arrangement for field study and conference during the semester. Prerequisite: Geology 1A or equivalent.

Spring (4)

**2A. General**

Similar to Geology 1A but without laboratory. Emphasis upon origin and development of earth's surface features. Open to all students except physical science majors or those already presenting credit in Geology 1A. Two lectures and one demonstration and discussion hour weekly.

Fall (3)

**2B. Physiography of United States**

A study of the land forms of the United States and their physiographic history as illustrative of universal geologic conditions. Two lectures and one discussion hour weekly. Prerequisite: Geology 1A or 2A.

Spring (3)

**21A-21B. Mineralogy**

Study of the common minerals and rocks. Use of the blowpipe and simple chemical reagents but with emphasis upon sight determination. Prerequisite: Geology 1A and high school chemistry, or equivalents.

Year course (3-3) (Offered in 1946-47 and alternate years)

### Upper Division Courses

**100. Structural Geology**

The evolution and description of the structural and topographical features of the earth. Faulting, folding, and orogenic forces with practical illustrations from the North American Continent and emphasis on California geologic conditions. Lectures, discussions, and occasional field trips. Prerequisite: Geology 1A-1B or 2A-2B.

Fall (3) (Offered in 1947-48 and alternate years)

**101. Geologic Problems**

Reconnaissance of adjacent areas with elementary mapping; or directed reading and group discussion of California Geology; or selection and preparation of materials for the museum collections. Prerequisite: Geology 1A-1B. Registration subject to approval of instructor.

Fall and Spring (1-4)

## MATHEMATICS

Lower division preparation for the liberal arts major in mathematics: Mathematics 3A, 3B, 4A, with an average grade of C or better. Two or more of the following are recommended: Astronomy 1, Economics 1A-1B, 2, Engineering 21, French A-B, German A-B, Physics 1A-1B or 2A-2B, Surveying 1A.

Liberal arts major (upper division): Twenty-four units including at least eighteen in upper division mathematics, the others being selected from Astronomy 107, Chemistry 111A-111B, 144, Physics 105A-105B, 112 and other approved courses. The major should be arranged in consultation with the chairman of the department and completed with a grade of C or better.

### Recommended Minor

### Lower Division

The student in the lower division is introduced to analytic geometry, which in turn shows the varied relations existing between algebra, geometry, and trigonometry, all of these merging in the calculus. Constant use of arithmetic is found in the applied courses.

The courses taken in the lower division will vary according to the student's accomplishment in high school and to his aptitude in the subject. He will be guided by the counsel of the departmental representative regarding preparatory courses. All students will take the core course, Mathematics 3A-3B, or its equivalent. Many will be able to take 4B as well. One of the following applied courses in Mathematics should be included in the fifteen semester units of lower division or in the upper division: Economics 2, Mathematics of Finance; Engineering 1A, Plane Surveying; Engineering 21, Descriptive Geometry; Astronomy 1, Descriptive Astronomy; Physics 1A or 2A, Mechanics; Economics 140, Statistics.

### Upper Division

Not less than nine semester units to be selected under the guidance of the departmental representative from the following: Mathematics 101, 104, 106, 111, 117, 119.

### Description of Courses

Refer to the College Bulletin, page 87, for description of courses in Engineering; page 85 for Astronomy; page 92 for Physics; page 99 for Economics.

### Lower Division

**A-B. Basic Mathematics**

A year course roughly equivalent to the two year sequence in algebra and geometry as given in the high school. More time is given to arithmetic and numerical trigonometry and less to demonstrative geometry.

Year course (3-3)

**C. Intermediate Algebra**

The course begins with an extensive review of elementary algebra. Topics covered include quadratic equations, simultaneous equations, ratio and proportion, variation, arithmetic and geometric progressions, binominal expansion and logarithms. It is equivalent to the second year-course in high school algebra. Prerequisite: Elementary Algebra and Geometry or Mathematics A-B.

Fall and Spring (4)

**D. Trigonometry**

Roughly equivalent to the high school course in plane trigonometry but with more attention than is often given to those aspects needed in analytic geometry and calculus. Prerequisites: Intermediate algebra.

Fall and Spring (3)

**E. Solid Geometry**

A course in intuitive solid geometry with much attention to the calculation of surfaces and volumes for the simpler solids and for certain others used in industry. Prerequisite: Intermediate algebra.

Fall (2)

**S. Slide Rule**

Theory and use of the slide rule. Practice in performing the fundamental operations of arithmetic. Some attention is given to more involved computations. Prerequisites: Intermediate algebra and either trigonometry or solid geometry. The class meets twice a week.

Fall and Spring (1)

**1. College Algebra**

Review of algebra and trigonometry. New material includes identities, graphs, solution of algebraic and trigonometric equations, determinants, and mathematical proofs. Prerequisites: Two years of algebra, and trigonometry.

Fall and Spring (3)

**3A. Plane Analytic Geometry**

Equations and loci, conic sections, coordinate transformations, cartesian and polar coordinates, and parametric representation. Prerequisites: Algebra, plane geometry, intermediate algebra, and plane trigonometry, with a high degree of proficiency, or a satisfactory grade in Mathematics 1, College Algebra. In order to determine the degree of proficiency, examinations in intermediate algebra and plane trigonometry will be given during the first week of the semester. Students falling below the required standard will be assigned to Mathematics 1.

Fall and Spring (3)

**3B. First Course in Calculus**

Introduction to differential and integral calculus, with applications to problems involving variable rates and summations. Prerequisites: Mathematics 3A.

Spring (3)

**4A. Second Course in Calculus**

Differentiation, integration, infinite series, and a brief treatment of solid analytic geometry. Prerequisite: Mathematics 3B. Solid geometry is recommended.

Fall (3)

**4B. Third Course in Calculus**

Partial differentiation, successive integration, and applications. Prerequisites: Mathematics 4A.

Spring (3)

### Upper Division Courses

**101. Elementary Geometry for Advanced Students**

Non-Euclidean Geometry, transformations, constructions with ruler and compasses, and famous problems. Prerequisites: Mathematics 4A.

Fall (3) (Offered 1946-47 and alternate years)

**104. History of Mathematics**

History of mathematics down to early modern times. Prerequisite: Mathematics 3A-3B.

Fall (3) (Offered in 1947-48 and alternate years)

**106. Projective Geometry**

Concurrence of lines, collinearity of points and other properties of figures not altered by projections; construction and study of ellipses, hyperbolas and parabolas by means of projections. Prerequisites: Mathematics 3A-3B.

Fall (3) (Offered in 1947-48 and alternate years)

**111. Theory of Algebraic Equations**

Determinants, complex numbers, and theory of algebraic equations. Prerequisite: Mathematics 3A and 3B.

Spring (3) (Offered in 1946-47 and in alternate years)

### 117. Intermediate Calculus

Essentially the same as Mathematics 4B with additional special work for advanced students. Prerequisites: Mathematics 3A, 3B, and 4A. Credit not allowed for both 4B and 117.

Spring (3)

### 119. Differential Equations

Ordinary differential equations of first and second order, with applications. Prerequisite: Mathematics 4A-4B (4B concurrently if desired).

Spring (2) (Offered in 1947-48 and alternate years)

### 140. Probability and Statistics

Statistical theory and method from the mathematical standpoint; applications in social and natural science. Prerequisite: Mathematics 4A.

Fall (3) (Offered in 1946-47 and alternate years)

### 199. Special Study

Study of materials mainly supplementary to the courses listed above. Prerequisites: Average grade of B or better in at least 12 units beginning with Mathematics 3A.

Fall and Spring (1 or 2, each semester)

## PHYSICAL SCIENCE

Lower division preparation for the liberal arts major in physical science and for the junior certificate: Fulfillment of the respective departmental lower division requirements for upper division work in at least two of the following sciences: Astronomy, chemistry, geology, and physics. Recommended: A reading knowledge of French and German.

Liberal arts major (upper division) in physical science, required: Twenty-four units of upper division work in two or more of the physical sciences: Chemistry, geology, and physics, with a minimum of six units in each of two of these sciences.

### Lower Division Courses

### 1A. Introduction to Physical Science

A survey course dealing with the nature of man's physical universe. Emphasis will be upon materials chosen from topics in astronomy and physics to show the nature and development of the scientific method and man's use of energy. Not open to students who have had a high school or college course in either physics or astronomy. May be taken with or without plans to continue with 1B.

Fall and Summer (3)

### 1B. Introduction to Physical Science

A continuation of Physical Science 1A. Emphasis will be upon units chosen from geology and chemistry to show the origins of natural materials and their use by man in the modern world. Not open to students who have had a high school or college course in either chemistry or geology. May be taken with or without credit in Physical Science 1A.

Spring (3)

### 10. Elementary Photography

This course seeks to provide an elementary knowledge of dark room techniques and the theory of photography including printing, enlarging, and developing. Two lectures and one three-hour laboratory required each week.

Fall and Spring (3)

## PHYSICS

Lower division preparation for the liberal arts major in physics and for the junior certificate: Physics 1A-1B-1C-1D; Chemistry 1A-1B; Mathematics 3A-3B and 4A-4B, or their equivalents. Recommended: A reading knowledge of French and German. A maximum of 12 units of lower division physics may be applied toward the degree.

Liberal arts major (upper division) in physics, required: Twenty-four units of upper division work in physics including Physics 105A-105B and 110A-110B.

Six of the twenty-four units may be elected in related subjects and deviations from these requirements may be made on consultation with the chairman of the department.

## Lower Division Courses

### 1A. Mechanics of Solids

A development of the fundamental ideas which underlie the subject of physics and the application of them in the discussion of practical problems. Lectures, text-assignments, problem sets, and experimental laboratory work. Two lectures, and one laboratory period each week. Prerequisites: High school physics or chemistry, and trigonometry. Students deficient in any part of this requirement may enroll with permission of the instructor.

Fall (3)

### 1B. Mechanics of Fluids and Heat

A continuation of Physics 1A. Two lectures and one laboratory period each week.

Spring (3)

### 1C. Electricity and Magnetism

A continuation of Physics 1A and Physics 1B in the sophomore year. Two lectures and one laboratory period each week.

Fall (3)

### 1D. Sound and Light

A continuation of Physics 1A, Physics 1B, and Physics 1C. Two lectures and one laboratory period each week.

Spring (3)

### 2A. General Physics

Properties of matter, mechanics, and heat. A nonengineering course. Lectures, demonstrations, and discussions. Prerequisite: Two years of high school mathematics.

Fall (3)

### 2B. General Physics

A continuation of Physics 2A. Sound, light, electricity, and magnetism.

Spring (3)

### 3A. Physical Measurements

Laboratory work in mechanics and heat. Usually taken in conjunction with Physics 2A.

Fall (1)

### 3B. Physical Measurements

Laboratory work in sound, light, and electricity. A continuation of Physics 3B. Usually taken in conjunction with Physics 2B.

Spring (1)

## Upper Division Courses

### *105A-105B. Analytical Mechanics

Treatment of fundamental principles of statics, kinematics and dynamics of particles and rigid bodies. Prerequisites: Physics 1A-1B or 2A-2B and a working knowledge of calculus.

Year course (3-3)

### *106. Optics

A review of reflection, refraction and dispersion, with applications to optical instruments, followed by a survey of phenomena indicative of the physical nature of light: interference, diffraction, polarization, and spectral radiation. Prerequisite: Eight units in physics.

Fall (3)

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* Will be offered if there is sufficient demand.

***106L. Optical Measurements**

Laboratory work to accompany Physics 106.

Fall (1)

***107A-107B. Electrical Measurements**

Laboratory work designed to accompany Physics 110A-110B. Emphasis placed on the theory and use of electrical measuring instruments.

Year course (1 or 2 units for the year) (Offered in 1947-48 and alternate years)

***108. Modern Physics**

An introduction to physical investigations of the last half-century. Atomic structure and quantum theory in the light of high-vacuum phenomena, series in optical spectra, natural and induced radioactivity, and allied subjects. Prerequisite: Eight units in physics.

Spring (3)

***108L. Modern Physics Laboratory**

Laboratory, to accompany Physics 108.

Spring (1)

***110A. Introduction to Electricity and Electromagnetism**

Elements of the mathematical theory of electrostatics, of magnetostatics and magnetism, and of steady and varying currents. Students are encouraged to accompany the course with 1 unit of laboratory work. Prerequisites: Eight units in physics, and Mathematics 3A-3B.

Fall (3) (Offered in 1947-48 and alternate years)

***110B. Principles of Electromagnetism and Electronics**

A more complete study and an extension of the material surveyed in Physics 110A, illustrated with practical applications. Prerequisites: Physics 110A and consent of the instructor.

Spring (3) (Offered in 1947-48 and alternate years)

***112. Advanced Heat and Thermodynamics**

Thermal properties of matter. An introduction to the kinetic theory of gases and the laws of thermodynamics. Prerequisites: Eight units in physics and a working knowledge of calculus.

Spring (3) (Not offered in 1946-47)

***112L. Advanced Heat Laboratory**

Laboratory work in thermal expansion, specific heat, heat of combustion, radiation and other related topics in advanced heat. Designed to accompany Physics 112.

Spring (1) (Not offered in 1946-47)

***113L. Pyrometry Laboratory**

Laboratory work in the calibration and use of various temperature measuring devices. Prerequisite: Eight units in physics.

Spring (1) (Offered in 1947-48)

***114. Sound Waves and Acoustics**

A study of wave motion and its applications to the production, transmission and reception of sound. Architectural acoustics, speech and hearing, acoustical and musical instruments. Prerequisite: Eight units in physics.

Fall (3) (Offered in 1947-48)

***114L. Advanced Sound Laboratory**

Laboratory work in the problems of wave motion, standing waves, velocity of sound in various media, diffraction and interference, of sound. Designed to accompany Physics 114.

Fall (1) (Offered in 1947-48)

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* Will be offered if there is sufficient demand.

### 115L. Applied Acoustical Measurements

Laboratory work in various practical applications of acoustics. Directional and frequency characteristics of loudspeakers and microphones. Architectural acoustics. Prerequisite: Eight units in physics.

Fall (1) (Not offered in 1946-47)

### 199. Special Study

Reading or work on special problems in physics. Admission by consent of the instructor. Credit and hours to be arranged in each case. Open to students who have completed at least eight units of work in the department with grade of A or B.

Fall and Spring (1 or 2-1 or 2)

# DIVISION OF SOCIAL SCIENCES

## ANTHROPOLOGY

Lower division preparation for the liberal arts general major with concentration in anthropology: Anthropology 1A-1B, Sociology 50A, 50B, Geography 1, 2. Recommended: Geology 1A-1B, Spanish, German or French. See requirements for the general major, page 18.

### Lower Division Courses

**1A-1B. General Anthropology**

Origin and antiquity of man. Theories of human descent. Classification of races. Origin and early development of civilization.

Year course (3-3)

**54. Social Anthropology**

An anthropological study of social institutions in primitive and civilized societies. The evolution of family organization, religion, property right, and government traced in elementary and advanced civilization.

Spring (3) (Not offered in 1946-47)

### Upper Division Courses

**151A. The North American Indian**

Pre-Columbian cultures of the North American Indian. The origin and migration of New World peoples. Industries, arts, crafts, social organization, religion and other phases of American Indian civilization.

Fall (3)

**151B. Indian Civilizations of Middle America**

The development of civilization in Pre-Columbian Mexico and Central America: Aztec, Mayan, and related cultures.

Spring (3)

**152. Primitive Cultures (Ethnography)**

History and cultural development of primitive races of mankind. Consideration given to industries, arts, social organization, and religion of preliterate culture groups.

Fall (3) (Not offered in 1946-47)

**153. Primitive Religion**

Beliefs and ritual of primitive man. Magic and religion. Forms of animism and polytheism. Primitive mentality and the supernatural.

Spring (3) (Not offered in 1946-47)

**157. Primitive Myths and Rituals**

The folklore, mythology, and rituals of primitive cultures in the Eastern Mediterranean area. The early beliefs and classic myths of the Egyptians, Assyrians, Babylonians, and Greeks.

(Not offered 1946-47)

**165. Ethnology and Race Psychology**

The biological basis of race, somatic, serologic and constitutional typology, racial mentality, tests and their ethnopsychological significance, abnormality in ethnic groups. Race and culture; the development of ethnological theories, ethnological theories applied in anthropological field techniques.

Fall (3) (Not offered 1946-47)

## COMMERCE

Candidates for a teaching credential in business education should refer to the tatement "Admission to Teacher Education Curricula" on page 21, and to the cur-iculum for the A.B. Degree with a special credential in Business Education on age 27.

Lower division preparation for the liberal arts major in commerce and for the unior certificate: Economics 1A-1B, 14A-14B, 18A-18B; English 1B and 11 or 12, 3, 14, 15. 16; Geography 10A-10B, Mathematics C, or equivalent, and Economics 2; History 4A-4B or 8A-8B or Political Science 1A-1B or 71A-71B.

Liberal arts major in commerce, 24 upper division units required as follows: Economics 111, 121, 140, with 12 or more units additional chosen in one of the following roups:

A. Accounting: Economics 160A-160B, 161, 162.

B. Banking and Finance Economics 133, 135 and 6 units selected from Eco-nomics 107, 131, 134, 137.

C. Business Administration: 6 units selected from Economics 123, 125, 137, 142, 50.

Electives: 9 or more additional upper division units in economics.

### Lower Division Courses

#### 2. Mathematics of Finance

Interest and annuities; amortization; sinking funds; valuation of bonds; depre-iation; mathematics of building and loan associations; mathematics of life insurance. Prerequisites: Two years of algebra in high school, or equivalents.

Spring (3)

#### 14A-14B. Principles of Accounting

A knowledge of bookkeeping not required and not advantageous. The balance sheet; profit and loss statement; various types of books of original entry; the opening, conducting, and closing of books for different kinds of businesses; organizations, reorganizations, dissolutions, and consolidations, etc., keeping in view the best modern accounting practice. Five hours lecture and laboratory.

Year course (3-3)

#### 18A-18B. Commercial Law

The leading and fundamental principles of business law. Simple cases showing the actual application of the principles to commercial and business transactions, rather than the development of those principles. The subjects covered: contracts, sales, agency, partnerships, corporations, real property, negotiable instruments, insurance, and wills, with a brief study of evidence.

Year course (3-3)

### Upper Division Courses

#### 121. Business Administration

Problems of business administration as an interrelated whole and as an indication of lines of study which may lead to the solution of those problems. A discussion of the problems of the business administrator with particular reference to the character of the problems involved and to the control policies and devices of the manager. Questions, problems, and case studies. Prerequisite: Economics 1A-1B.

Fall (3)

#### 123. Marketing

A survey of the fundamental principles and methods of marketing. Intended as a basic training for students interested in the economics of advertising, sales management, retailing, and foreign trade, as well as for those wishing a knowledge of the existing market structure. Subjects covered include price policies, distribution methods, finance, risk, market information, and governmental regulation. Prerequisite: Economics 1A-1B.

Spring (3)

### 125. General Insurance

Economic theory of risk, its extent and importance to both the individual ar business; transfer of risk; distribution and prevention of loss; types of insuran carriers; problems of rate making; the insurance contract; coverages; special forms life, fire, marine and casualty insurance; state supervision.

Fall (3)

### 127. Life Insurance—Principles and Practice

A study of social and individual values involved in the institution of life insuranc The student is then directed to the types of life insurance companies and associatio home office and agency organization, types of contracts, surrender value, policy loa and extended insurance, surplus and dividend policies, reserves, group, industrial an social insurance, and state supervision.

Fall (3)

### 133. Corporation Finance

The corporate form of organization, instruments of long-time finance, methods raising capital, efficient financial management, the financing of reorganizations, an governmental control. Prerequisite: Economics 1A-1B.

Fall (3)

### 134. Investments

Investment principles and practices with emphasis upon problems of the sma investor, such as tests of a good investment, sources of information, types of stocks an bonds, mechanics of purchase and sale, investment trusts, real estate mortgages, an the like.

Spring (3)

### 137. Credits and Collections

The credit man and his work, including the instruments with which he work sources of credit information, the technique of his department, collection method legislation for the protection of debtor and creditor, and credit insurance.

Fall (3)

### 150. Labor Problems

A discussion of employment, hours, wages, working conditions, insurance, pe sions, workmen's compensation, labor organizations, and labor legislation. Organiz tion of personnel functions; selective devices, training and safety programs, compe sation plans, morale.

Spring (4)

### 160A-160B. Advanced Accounting

An intensive study of the corporation, its accounting and financial problems; thorough study of the balance sheet; depreciation; factory accounting, etc. Und practical accounting an endeavor is made to design, construct, and operate sets of boo to meet the needs of different conditions and kinds of businesses. Six hours lecture an laboratory. Prerequisite: Economics 14A-14B.

Year course (3-3) (Offered in 1946-47 and alternate years)

### 161A-161B. Cost Accounting

Principles and methods of cost accounting in the mercantile establishment an in the factory. A study of bookkeeping procedure, the forms used, and their appl cation to practical problems. Prerequisite: Economics 14A-14B.

Year course (3-3) (Offered in 1947-48 and alternate years)

### 162. Accounting Systems

The accounting systems used in various types of business and financial concern Some practice in devising and installing systems. Prerequisite: Economics 14A-14

Spring (3) (Offered in 1947-48 and alternate years)

### 164. Income Tax Procedure

A consideration of the problems arising from the Federal income tax. The problems are approached from the point of view of the taxpayer who desires to determine the exact application of the law to the interests he represents as well as from the accounting point of view. No knowledge of accounting procedure is necessary.

Fall (3) (Offered in 1947-48 and alternate years)

### 165A-165B. Auditing

The fundamental principles of accepted procedures of auditing and related types of accounting engagements.

Year course (3-3)

### 167. Governmental Accounting

A comparative study of accounting systems used by municipalities, counties, and the state of California; detailed comparisons with commercial practice; procedures in handling budget accounts, appropriations, and encumbrances; subsidiary records; cost records; internal checks; auditing.

Spring (3)

## ECONOMICS

Lower division preparation for the liberal arts major in economics and for the junior certificate: Economics 1A-1B, Commerce 14A-14B and at least one of the following: Political Science 1A-1B or 71A-71B, History 4A-4B, 8A-8B, Psychology 1A-1B, Sociology 50A-50B, Anthropology 50A-50B. Recommended: Commerce 18A-18B, Geography 10A-10B.

Liberal arts major in economics, 24 upper division units required as follows: Economics 100A, 140, and 100B or 111, with 9 or more additional units selected from Economics 100B, 107, 111, 131, 135, 150, 171, 195, Commerce 125 and 133. Electives: Six or more additional upper division units in economics or commerce. Political Science 143A-143B may be substituted for elective units in economics.

### Lower Division Courses

### 1A-1B. Principles of Economics

The basic principles of economics: utility, wealth, value, price; economic production, distribution, and consumption; rent, interest, wages, and profit; competition, monopoly, and large scale production; property, economic waste, and luxury; money and banking, international trade and tariffs; transportation corporations, labor problems, socialism, taxation, etc. Aims of the course: (1) to provide a foundation for further intensive study of economic problems; (2) to furnish to those who expect to follow business pursuits a broad foundation in economic principles; and (3) to introduce future citizens to political and economic problems of our time. Lectures, discussions, quizzes, and collateral reading. Not open to entering freshmen except by special arrangement.

Year course (3-3)

### Upper Division Courses

### 100A. Modern Economic Thought

Review of schools of economic thought in the light of recent economic theory with special reference to value and distribution. Special attention is given to the marginal utility theory of value, to the contributions of the institutional economists, and to the work of statisticians in the development of economic theory. Prerequisite: Economics 1A-1B.

Fall (3)

### 100B. Modern Economic Thought

A problem course. Subjects include price theory; distribution with particular emphasis on income; effects of various kinds and degrees of competition and regulation; war economy and government planning. Recommended: Economics 100A.

Spring (3)

**103. The Economics of War and Post-War Recovery and Reconstruction**

I, Backgrounds of the Present War; II, The Requirements of War Economy; III, International Recovery and Reconstruction; IV, National Recovery and Reconstruction.

Spring (3)

**107. Credit and Credit Institutions**

A study of the economics of credit, its cost, and the agencies supplying credit. Special attention is given to the growth of government credit agencies and their place in modern economic society. Prerequisite: Economics 1A-1B. Recommended: Economics 100.

Spring (3) (Not offered in 1946-47)

**111. Economic History of the United States**

A comprehensive survey of American economic development and of national legislation in the field of industry.

Spring (3)

**128. Land Economics**

Real estate in all its aspects: property rights, transfer of title, valuation, finance, selling, property management, taxation, insurance, city planning, and the like, with special emphasis upon problems as they exist in San Diego.

Fall (3)

**131. Public Finance**

Principles and practice of taxation, public expenditures, and financial administration. Economic effects of public expenditure, indebtedness, and taxation. Prerequisite: Economics 1A-1B.

Spring (3)

**135. Money and Banking**

The elements of monetary theory. History and principles of banking with special reference to the banking system of the United States. Prerequisite: Economics 1A-1B.

Spring (3)

**140. Statistical Methods**

The nature and uses of statistical method in the social sciences. Practice in tabular and graphic presentation of data; analysis of frequency and time series; index number construction and study of correlation techniques. Prerequisite: Mathematics A-B, and C or equivalent.

Fall (3)

**142. Business Cycles**

Fundamental factors in business cycles are analyzed and cycle theories are examined. Study of current business conditions begins early in the course and develops into practical application of forecasting methods to both business and other data. Prerequisite: Economics 140.

Spring (3)

**150. Labor Problems**

A study of labor organizations and their policies, wages, strikes, unemployment, social insurance, child labor, labor legislation, plans for industrial peace, and other labor problems.

Fall (3)

**171. Transportation**

The development of railway transportation; railroad financing; rates and rate making; governmental regulation; government operation of railroads during the war; recent development of motor and air transportation; current problems in public utilities. Prerequisite: Economics 1A-1B.

Fall (3) (Offered on demand)

**195. International Economic Relations**

A brief treatment of certain geographical, sociological, and legal phases of international relations followed by a study of the commercial and industrial basis of world economy touching upon a number of special problems involved. An introductory study of materials covering the processes, principles, and policies of international trade. The course concerns itself primarily with the economic basis of international relations, but political aspects are almost constantly taken into account in recognition of the fact that international relations are frequently political in form but economic in content.

Spring (3)

**198. Investigation and Report**

Designed to stimulate independent study and investigation; to furnish guidance in the collection, organization, and presentation of factual material; to improve the technique of term reports.

Fall and Spring (3-3)

**199A-199B. Special Study**

Designed exclusively for seniors with a major in economics.

Fall (1), Spring (1 or 2)

## GEOGRAPHY

Lower division preparation for the liberal arts major in geography: Geography 1, 2, 3, and Geology 1A-1B. Recommended: A reading knowledge of French or German.

Liberal arts major (major division): Twenty-four units of upper division work in geography or 18 units in geography and six units in related subjects arranged in consultation with the chairman of the department.

### Lower Division Courses

**1. Introduction to Geography: Physical Elements**

The nature of maps, weather and climates of the world; natural vegetation; land forms and their associated soils, with reference to their climatic relationships; the seas and their coasts. One all-day field trip. Open to all students who have not taken Geography 10A-10B. This course is classified as a natural science.

Fall and Spring (3)

**2. Introduction to Geography: Natural and Cultural Regions**

The regional differentiation of the world by human activity; areal bases of economy and nationality. Prerequisite: Geography 1.

Fall and Spring (3)

**3. Elementary Meteorology**

An elementary study of the earth's atmosphere and changes in it which produce our weather and influence human affairs. Special attention given to local conditions, instruments, and records. Aeronautical meteorology stressed in the fall semester. This course is classified as a natural science.

Fall (3)

**4. Map Reading and Map Interpretation**

Representation of geographic data by means of maps. Interpretation of projections, scales, symbols, land forms, and culture from topographic maps; measurements of cultural data on maps. Prerequisite: Geography 1.

Fall (2)

**10A-10B. Economic Geography**

Beginning course in economic geography limited to students in commerce and prospective economics majors. Not open to students who have had Geography 1 and 2. This course may serve as prerequisite to upper division geography courses.

Fall and Spring (3-3)

### Upper Division Courses

**112. Geography of California**

The physiographic regions of California and the cultural landscapes developed by the successive cultural groups. Prerequisite: Geography 1.

Spring (3)

**116. Geography of Latin America**

The natural regions of Latin America; their occupational condition and historical evolution. Prerequisite: Geography 1.

Spring (3)

**117. Geography of Northern and Eastern Europe**

A study of the cultural development of the countries of northern and eastern Europe in relation to physical background and historical evolution. Prerequisite: Geography 1.

Fall (3)

**118. Geography of the Mediterranean Area**

A study of the cultural development of the countries of Southern Europe, Western Asia, and North Africa in relation to physical background and resources. Prerequisite: Geography 1.

Spring (3)

**121. Geography of North America**

The natural regions of North America, their formation and economic and historical development. Prerequisite: Geography 1.

Fall (3)

**124. Geography of Asia**

The cultural regions of Asia, their physical environment, and historical development. Prerequisite: Geography 1.

Spring (3)

**135. Geography of the San Diego Area**

Directed individual urban and rural field work in the San Diego area; the mapping of a small area and making its geographic interpretations. Prerequisites: Geography 1 and 2.

Fall (3)

**141. Economic Geography**

A survey of the raw materials of world trade; their production and distribution as related to major geographic regions of the world. Prerequisite: Geography 1.

Fall (3)

**166. Honors Course**

To be arranged after consultation with the chairman of the department. (See page 14.)

Fall and Spring (Credit to be arranged)

## HISTORY

Lower division preparation for the liberal arts major in history: History 3A-3B or 4A-4B or 8A-8B or 17A-17B and either Political Science 1A-1B, 71A-71B or Economics 1A-1B. Two lower division history courses are recommended for students planning to major in history. No student shall enroll in more than one lower division history course during a semester.

Upper division history requirements for the liberal arts major: At least twenty-four units in upper division courses in history, to be arranged in consultation with the chairman of the department. A reading knowledge of at least one foreign language is expected of history majors.

The history minor: From 15 to 18 units of work in history is recommended. At least nine units of the work must be chosen from upper division courses.

## Lower Division Courses

**A-3B. Survey of Ancient Civilizations**

Introduction to pre-history and Mediterranean civilizations.

Year course (3-3)

**A-4B. History of Modern Europe**

Development of European society and institutions from about 1500 A.D.

Year course (3-3)

**A-8B. History of the Americas**

Survey of the history of the western hemisphere from the discovery to the present time. Based on H. E. Bolton's "Syllabus of the History of the Americas."

Year course (3-3)

**7A-17B. History of the United States**

Survey of the political and social development of the United States, with emphasis upon the rise of American civilization and ideals.

Year course (3-3)

## Upper Division Courses

**111A-111B. Ancient History**

(A) Greek history to the Roman conquest. (B) Roman history to the fourth century A.D.

Year course (3-3)

**121A-121B. Medieval History**

Survey of European political and cultural development between 500 and 1300 A.D.

Year course (3-3)

**131A-131B. Renaissance, Reformation and Counter-Reformation**

A history of personalities and events connected with the social, cultural, economic and religious change between 1300 and 1600.

Year course (3-3)

**143. The French Revolution and Napoleonic Era**

Study of conditions in France prior to 1789, the Revolution from 1789 to 1799, the organization of France under Napoleon, the character of his Empire and the reorganization of Europe at the Congress of Vienna, 1815.

Fall (3)

**144. Europe Since World War I**

Developments in Europe from 1919 to the present. Special emphasis upon the background of World War II.

Spring (3)

**151A-151B. History of England**

A survey of political and constitutional development in England since 1066, stressing the transition from medieval to modern England, Tudor despotism, the struggle for self-government under the Stuarts and the rise and development of present-day political and social institutions.

Year course (3-3)

**161. Mexico and the Caribbean Countries**

Special attention to the relations of the United States with these countries and to recent developments in Mexico.

Fall (3)

### 162. South America Since Independence

The republics of South America. Attention directed to the development nationality in South America, struggles for political stability, exploitation of resource diplomatic and commercial relations with the United States, and other internation problems of South America. Survey of present-day conditions, political, economi and social.

Spring (3)

### 171A-171B. The Rise of the American Nation

Semester I: Lectures and readings on English colonization in North Americ the development of colonial institutions and political customs, and areas of inte national conflict during the 18th century. Semester II: The revolutionary movemen and the establishment of the government under the Constitution of 1787 to the close the War of 1812.

Year course (3-3)

### 172A-172B. Constitutional History of the United States

A study of the work of the convention of 1787, the problems involved in settin up the new government under the Constitution, the nature of the Federal system as becomes defined in governmental practices and court decisions, the nature of th system of individual rights.

Year course (3-3)

### 173A-173B. The Expansion of the United States

Lectures and readings on Jacksonian Democracy, territorial expansion and th Mexican War, the slavery controversy, Civil War and Reconstruction, and attentio to the growth and progress of the United States to the close of the 19th century.

Year course (3-3)

### 175. The United States in the Twentieth Century

The rise of the United States to be a world power; social and economic prob lems posed by the machine age; political action and adjustment, actual and propose intended as solutions for these problems.

Spring (3)

### 176A-176B. History of American Foreign Policy

Lectures and readings in the field of American foreign relations since 177 with special emphasis, in the second semester, upon affairs since 1900. A genera survey course.

Year course (3-3)

### 179A-179B. Intellectual History of the American People

A study of the ebb and flow of ideas in the United States since the foundin of the English colonies, with special attention devoted to social and political thought

Year course (3-3)

### 191A-191B. History of the Far East

Particular emphasis during the first semester on the history, both internal an international, of the Far East through the 19th century. The second semester wil be devoted to a consideration of developments in the 20th century.

Year course (3-3)

### 199. Special Course for Advanced Students

Required of all students with a history major in the liberal arts curriculum and to be attended during the senior year. Other students may be admitted with th permission of the instructor.

Spring (2)

## LIBRARY SCIENCE

### 10. Use of the Library

The chief object is to give a working knowledge of some of the resources of the library which every teacher and student should understand—the decimal classification, the card catalog, periodical indexes, and the most important reference books, together with some instruction in the preparation of bibliographies. The course will be a requirement of those students added to the library's staff of student assistants, although it will not prepare the student to become a librarian.

Fall and Spring (2)

## MERCHANDISING

### 20. Consumer Economics

Growing importance of consumption as a field for study; consumer incomes in the United States; consumption and business cycles; bases of consumer choice-making; practical problems of buying food, clothing, shelter, transportation, insurance, etc.; family budgeting; a survey of the methods by which products reach the consumer; market structure and functions seen from the consumer's point of view.

Fall (3)

### 24. Merchandising

A study of retail stores, emphasizing the problems of store managers and merchandising executives; store location, organization, personnel, sales promotion, buying and handling of merchandise, inventory, turnover, and control methods. Changing conditions in retailing, problems of profitable operation under present conditions.

Spring (3)

### 25. Salesmanship

Theoretical and psychological backgrounds of salesmanship, newer concepts of selling; the selling of ideas and services; steps in a sale: attention, interest, desire, closing; the development of clienteles and of good will; the personal factor in salesmanship.

Fall (3)

### 26. Applied Salesmanship

Classroom practice in selling; supervised work in cooperating stores, or outside selling; relationships between theory and practice in specific selling situations; incentive methods of payment in selling; the problem of sales managers in reducing selling costs.

Spring (2)

### 26A. Life Insurance Salesmanship

A study of the special problems of life insurance selling, with emphasis on the psychological aspects of insurance selling, and on specific techniques for finding prospects, and for managing the sales interview. A course for students interested in life insurance selling, and for those planning to obtain life underwriter's certification. To be taken in conjunction with 26 (see above) and not available as a separate course.

Spring (26 and 26A, taken together, 3 units)

### 27. Advertising

A survey of advertising from the point of view of the business man and the consumer; business principles applied to advertising; basic psychological appeals employed; market analysis as an advertising tool; budgeting of appropriations; selection of mediums; layout, art work, copy; publicity devices; institutional advertising; the function of agencies; radio as a specialized advertising problem.

Spring (3)

## PHILOSOPHY

### 1A, 1B. Introduction to Philosophy

A non-historical introduction to the types and problems of philosophy. The most inclusive and influential world-views are studied at length, then the principal problems of philosophy are considered in terms of these basic systems. Prerequisite: Sophomore standing, or permission of instructor.

(1A, Fall and Spring, 3) (1B, Fall and Spring, 3)

### 3A, 3B. History of Thought

A study of the basic ideas of Western Civilization in their historical development. The making of the modern mind as revealed in the development of philosophy and in the relations between philosophy and science, art and religion. The history of ideas against the social and political backgrounds from which they came. Prerequisite: Sophomore standing, or permission of instructor.

Fall, Spring (3, 3)

### 8. Social Philosophies

The study of man's speculation regarding his "right" organization, together with the assumptions, analogies and economics determining his temporary conclusions. Among the thinkers studied are Hobbes, James I, Rousseau, Locke, Jefferson, Kropotkin, Mill, Marx, Mussolini, Dewey, Pius XI, Hoover, Roosevelt, etc. (May be taken for lower or upper division credit.)

Spring (3)

## Upper Division

### 108. Social Philosophies—(see Philosophy 8)

### 120. Reflective Thinking (Logic)

Analysis of fallacies, and the logic of argument and proof; an examination of reflective procedures in various fields of knowledge, and a review of some psychological descriptions of thought. Prerequisites: Psychology 1A and at least one semester of philosophy.

Spring (3) (1947-48 and alternate years)

### 130. Ethics

The search for the Good Life. The principal theories of ethical obligation, the sources of moral authority, and the various views regarding the nature of the "highest good" and the related goals of intelligent living.

Fall (3) (1947-48 and alternate years)

### 136. Philosophy of Art

A study of the nature of esthetic experience, both in itself and in relation to the rest of human experience. Particular effort is made to disentangle man's esthetic attitude and activity (whether in the field of art, nature or daily life) from those experiences and evaluations with which the esthetic is frequently confused. The principal theories of art, both traditional and contemporary, are studied at length—both in relation to actual artistic production and to art's role in society.

Spring (3)

### 137. Philosophy of Science

A critical examination of the basic concepts and methods underlying contemporary scientific thought. Nature of scientific knowledge, conceptions of nature, natural law, relation of the scientific interest to other interests, and contributions of the special sciences to a view of the universe as a whole.

Fall (3)

## POLITICAL SCIENCE

The minor in Political Science: From 15 to 18 units of work is recommended. At least 9 units must be chosen from upper division courses.

It is suggested that students who expect to major in Political Science plan their lower division work to include both Political Science 1A-1B and 71A-71B, and either Economics 1A-1B or History 4A-4B.

## Lower Division Courses

### 1A-1B. Comparative Government

A comparative study of typical governments. Semester I: England, France and Switzerland. Semester II: Italy, Germany, Russia and Japan.

Year course (3-3)

### 1A-71B. American Government and Politics

Semester I: Governmental organization in the United States; Federal system, rganization, powers and functions of the legislative, executive and judicial branches of .ie national government, and the expansion of its activities. Semester II: Develop-ient of the means of democratic control of government in the United States; the istory, motivation, methods and control of political parties; party machines; election ystems; influence of minority groups; the lobby; the press.

This course is not open to freshmen.

Year course (3-3)

### Upper Division Courses

### 01. American Institutions

A study of the principles of the Constitution of the United States, and a survey f the political and social institutions which have developed under it.

Fall (2)

### 11A-111B. Theory of the State

The nature of the State, its organization and activities, and its relation to the ıdividual and to other states. Special attention is given to recent developments in the eld of political thought.

Year course (3-3)

### 33A-133B. Principles of International Law

This course is concerned with the function of law in the international community. 'he historical development of the theory and rules of international law, the application f international law in international relations and the application of international law ı national courts.

Year course (3-3)

### 41. Theories of International Relations

The development of ideas concerning international relations from ancient through ıodern times. Theories of nationalism, imperialism, internationalism and cosmo-olitanism will be reviewed and their validity considered in the light of modern xperience.

Fall (3)

### 42. International Organization

Pre-war attempts at international organization, the effect of World Wars I and I on the ideas of international relationships. Post-war attempts at organization. ·pecial attention will be given to the organization and development of the League of 'ations, its machinery, accomplishments and failures, and to national attitudes towards ooperation after World War I.

Spring (3)

### 43A-143B. Principles of Public Administration in the United States

A study of the development of executive agencies in the American federal govern-ıent and the relationship between these agencies and the changes in American concepts oncerning the proper field of governmental activity.

Year course (3-3)

## PSYCHOLOGY

Lower division preparation in psychology for advanced work. Recommended: 'sychology 1A-1B, Zoology 1A-1B or Biological Science 10A-10B, Philosophy 3A-3B r 5A-5B, Mathematics 8, a foreign language and some physics, anthropology and ociology.

### Lower Division Courses

### A. General

An elementary survey of normal adult psychology, descriptive and organizational; he subjective and objective aspects of behavior. Furnishes basis for all other courses n psychology and is prerequisite therefor.

Fall and Spring (3)

### 1B. General Applied

A continuation of general psychology designed to familiarize the student with (1) elementary statistical methods and (2) fields of applied psychology and possibly (3) some one topic (not included in upper division courses) in which he pursues an independent experimental approach if judged advisable or for additional unit. Required for advanced study. Prerequisite: Psychology 1A.

Fall and Spring (3)

## Upper Division

### 105. Mental Testing

Binet individual test administration, leading to certificate; additional test study and testing for additional credit. Prerequisites: Psychology 1A, 1B.

Fall (3)

### 118. Mental Hygiene

Problems, personality adjustment, emotional problems, attitudes, conflicts, neurotic behavior, conduct disorders of both child and adult.

The beginnings of undesirable attitudes and habits and methods of treating them are stressed more than serious cases of maladjustment which are either incurable or problems for a psychiatrist. The methods of building wholesome personality are emphasized more than the analysis of extreme disorders. Prerequisites: Psychology 1A, 1B.

Spring (3)

### 145. Social Psychology

Personality as it develops in relation to social environment. Suggestion, imitation, leadership, the crowd, public opinion, social control, prejudice, propaganda, sex differences, race differences, etc. Prerequisites; Psychology 1A, 1B.

Spring (3)

### 150. Abnormal Psychology

The relation of psychology to the psychoneuroses and insanity; the appearance of abnormal traits in incipient stages of mental disturbances. Methods of diagnosis and early treatment. Prerequisites: Psychology 1A, 1B. Recommended: Psychology 118.

Fall (3)

### 151A. Clinical Psychology

A study of diagnostic devices in psychology, tests of clinical significance, ratings, interviewing for securing information, projective and case study analyses; problems of insight, rapport, empathy, and prediction of individual behavior. Prerequisites: Psychology 1A, 1B, 118 or 150. Recommended: Psychology 105.

Fall (3)

### 151B. Clinical Psychology

A study of non-medical psycho-therapies—ancient, medieval, and modern, but all contemporary; particularly non-directive counseling and such directive methods as naively operate in making friends and influencing people. Prerequisite: Psychology 151A unless waived by consent of instructor.

Spring (3)

### 160. Experimental Psychology of Learning

Introduction to instrumental and comparative psychology and to methods of research in the development of behavior theory. Prerequisite: 5 units of other work in the department and consent of the instructor; required of those seeking a major.

Fall (3)

## SECRETARIAL TRAINING

### A. Business Mathematics

A practical course in the mathematics of business. A thorough study of interest, compound interest, discount, amortization tables, insurance rates, etc.

Fall and Spring (1) (No credit will be counted toward A.B. Degree requirements, except in the curricula leading to the Business Education Credential.)

**A-1B. Typewriting**

A rapid development of a thorough command of a keyboard by the touch method. he acquisition of speed and the artistic arrangement of typewritten material with pecial reference to commercial forms, tabulation and billing; specifications, legal orms, and preparation of manuscripts; transcription, mimeographing, etc. Eight ours lecture and laboratory practice.

Year course (3-3) (No credit will be counted toward A.B. Degree requirements xcept in the curricula leading to the Business Education Credential)

**A. Typewriting**

A short course designed for those not wishing to enter the business office but esiring a knowledge of the use of the typewriter. Five hours laboratory practice.

Spring (2)

**A. Office Procedure**

Practice and principles of office management, including organization, arrangeent and operation. Study and use of modern office appliances such as the multiraph, mimeograph, filing devices, calculating and bookkeeping machines. Preequisite: Secretarial Training 1A or its equivalent.

Fall and Spring (3) (No credit will be counted toward A.B. Degree requireents except in the curricula leading to the Business Education Credential)

**A-5B. Shorthand**

An intensive course designed for the practical preparation of office secretaries. thorough study of the Gregg System. Development of the ability to read and write horthand rapidly and correctly, both literary and commercial. The shorthand speed ecessary to pass a civil service examination is attained by the end of the year.

Year course (5-5)

**A-6B. Advanced Shorthand**

Development of speed in writing and transcription. Advanced dictation on etter forms, legal forms, speeches, and literary and technical material.

Year course (3-3)

**nglish in Business** (See English 8)

## SOCIAL SCIENCE

Lower division preparation for the liberal arts major in social science: Fulfillent of the respective departmental lower division requirements for upper division in t least three of the following sciences: Anthropology, economics, geography, history, olitical science, sociology. Liberal arts major (upper division) in social science, equired: Twenty-four units of upper division work including a concentration of twelve pper division units in one of the following fields and six units in each of two others: nthropology, economics, geography, history, political science, sociology.

This major is available only to students who are preparing for graduate work in nthropology, political science, or sociology, and to those enrolled in certain preproessional and other curricula. Official approval for candidacy for a degree with a ocial science major must be obtained from the Dean of the upper division.

### Lower Division Course

**. Contemporary Political, Social and Economic Problems**

An analysis of major problems of the present day with reference to the conditions ut of which they arise and with regard to their essential unity and interrelationships. articular attention to implications of the war and post-war problems. An attempt o introduce the student to sound methods of approach in dealing with these problems.

Fall and Spring (3)

## SOCIOLOGY

Lower division preparation for the liberal arts major in social science with oncentration in sociology: Sociology 50A, 50B; Economics 1A-1B and one of the ollowing year courses: Anthropology 50A-50B, Political Science 1A-1B, 71A-71B. ee requirements for the social science major.

### Lower Division Courses

**50A. Introduction to Sociology**

A study of modern social problems recognizing the geographic, economi psychological, and sociological factors involved. Emphasis is on a scientific method approach. An evaluation of various causes and solutions of problems is made.

Fall (3)

**50B. General Sociology**

The development and use of the concepts of sociological analysis, such as huma nature, the effects of isolation and social contacts upon the development of personalit social interaction; social processes; social forces; social control; collective behavio and social progress.

Spring (3)

**55. Marriage and Family Life**

A psychological and sociological approach to the study of marriage and t family. Some of the topics considered are: relation of courtship to marriag emotional maturity and marriage; eugenic aspects of marriage; college marriage harmony in modern marriage; economic adjustment in marriage, parenthood. Prere uisite: Health Education 1 or 2; a biological science and Psychology 1A recommende Not open to Freshmen.

Spring (3)

### Upper Division Courses

**105. Social Pathology**

A study of the alleged abnormal phenomena in society; family disorganizati and personal demoralization; pathology of individual and group relationships and economic, social, and cultural relationships. Prerequisite: Sociology 50AB.

Fall (3)

**106. Criminology and Penology**

The extent and characteristics of crime; consideration of physical, menta economic, and sociological causes of crime; study of methods of penal disciplin prison labor, parole, and probation; programs of prevention. Prerequisite: Sociolo 50AB.

Spring (3)

**108. The Family**

History of marriage and family as a social institution. Effects of vario economic and social factors on the modern family; higher education and the bir rate; married women in industry and professions; causes of desertion and divor and their sociological effects. Not open to students who have credit for Sociology 5

Spring (3) (Offered in 1947-48 and alternate years)

**109. Fields of Social Work**

A survey of the nature of social work and the various kinds of social work whi are found in modern urban life. The student is familiarized with the various soci agencies in the community, their problems and methods of work, by readings and fie trips. Volunteer social work in some social agency recommended. Prerequisit Sociology 50AB.

Spring (3)

**126. Social Reform Movements**

A study of organized efforts to change social institutions in the United Stat since 1865. Emphasis given to backgrounds, objectives, techniques, and relationsh to democracy of each movement. Prerequisite: Sociology 50AB.

Fall (3)

**197. Urban Sociology**

A study of the structure and function of the modern city; types of neighbo hoods; forms of recreation; social forces in a metropolitan area; types of urba personalities and groups; rural-urban conflicts of culture. Practical field studi required. Prerequisite: Sociology 50AB.

Fall (3)

# TWO-YEAR CURRICULA

These curricula are organized for students who have not yet qualified for enrollment in a four-year curriculum leading to the Bachelor of Arts degree. Regularly qualified students who prefer a shorter completion course will take only such two-year courses as may be required in the specialized curricula they are following. Upon satisfactory completion of the requirements in these two-year curricula the student is granted a diploma. By maintaining a high grade of scholarship the student may secure the opportunity of transfer to a four-year program. Such transfers are made by action of a faculty committee after the student has completed one or more semesters in a two-year curriculum. Upon transfer the credits earned in courses in the two-year program in which grades of A and B have been received are allowed to count toward the Bachelor of Arts degree but are reduced by one step in grade.

Courses numbered 40 and 45 are not open for credit to students in a four-year curriculum.

A two-year student may elect any other college lower division subject under guidance where his high school scholarship record, or his scores in the aptitude and achievement tests, or his college record indicates probable success in that field. He must, of course, meet all prerequisites for the course under consideration.

## TWO-YEAR CURRICULUM IN LIBERAL ARTS

| First Year | *Units Sem. I* | *Units Sem. II* |
|---|---|---|
| English 40A or 40B and 40C | 3 | 3 |
| *Physical Science 40 or equivalent | -- | 3 |
| *Biology 40 or equivalent | 3 | -- |
| Social Science 40 | 3 | -- |
| Sociology 40 | -- | 3 |
| Health Education 1 or 2 | -- | 2 |
| Physical Education | ½ | ½ |
| Psychology 40 | 3 | -- |
| Elective | 3 | 4 |
| | 15½ | 15½ |
| **Second Year** | | |
| Speech Arts 40 or English 45, 46 or 47 | 3 | -- |
| Social Science (Economics 45A, Geography 40B, Merchandising 20, or Social Science Elective) | 3 | -- |
| Social Science 45 | -- | 3 |
| Elective | 9 | 12 |
| Physical Education | ½ | ½ |
| | 15½ | 15½ |

* Not less than 6 units of natural science must be completed in college.

## TWO-YEAR CURRICULUM IN ART

### First Year

| | *Units Sem. I* | *Units Sem. II* |
|---|---|---|
| English 40A, or 40B | 3 | -- |
| English 40C | -- | 3 |
| Social Science 40 | 3 | -- |
| Biology 40 or equivalent | -- | 3 |
| Psychology 40 | 3 | -- |
| Health Education 1 or 2 | -- | 2 |
| Art 6A-6B | 2 | 2 |
| Aesthetics 5 or equivalent | -- | 2 |
| Art A-B or equivalent | 2 | 2 |
| Physical Education | ½ | ½ |
| Elective | 2 | 1 |
| | 15½ | 15½ |

### Second Year

| | | |
|---|---|---|
| Physical Science 40 or equivalent | 3 | -- |
| Social Science 45 | -- | 3 |
| Art Electives | 9 | 9 |
| Physical Education | ½ | ½ |
| Elective | 3 | 3 |
| | 15½ | 15½ |

Art Elective: Art 7, 11A-11B; 14A-14B, 15A-15B, 16A-16B, 52A, 94.

## TWO-YEAR CURRICULUM IN MUSIC

### First Year

| | *Units Sem. I* | *Units Sem. II* |
|---|---|---|
| English 40A or 40B | 3 | -- |
| English 40C | -- | 3 |
| Social Science 40 or equivalent | 3 | -- |
| Psychology 40 | -- | 3 |
| Health Education 1 or 2 | -- | 2 |
| Music 1A-1B or equivalent | 3 | 3 |
| Aesthetics 1A-1B | 2 | 2 |
| Music Elective | 1 | 1 |
| Applied Music | 0–1 | 0–1 |
| Physical Education | ½ | ½ |
| Elective | 2–3 | 1–2 |
| | 15½ | 15½ |

### Second Year

| | | |
|---|---|---|
| Physical Science 40 or equivalent | 3 | -- |
| Biological Science 40 | -- | 3 |
| Social Science 45 | -- | 3 |
| Speech Arts or Foreign Language | 3 | 3 |
| Music 4A-4B or approved substitute | 3 | 3 |
| Applied Music | 1–2 | 1–2 |
| Elective (including at least 2 units of music) | 4–5 | 1–2 |
| Physical Education | ½ | ½ |
| | 15½ | 15½ |

## TWO-YEAR CURRICULUM IN ACCOUNTANCY

| First Year | *Units* *Sem. I* | *Units* *Sem. II* |
|---|---|---|
| Commerce 40A-40B | 3 | 3 |
| English 8 | -- | 3 |
| English Elective | 3 | -- |
| Secretarial Training A | 1 | -- |
| Secretarial Training 1A-1B | 3 | 3 |
| Health Education 1 or 2 | -- | 2 |
| *Physical Science 40 or equivalent | 3 | -- |
| *Biological Science 40 or equivalent | -- | 3 |
| Elective | 3 | -- |
| Physical Education | ½ | ½ |
| | 16½ | 15½ |
| **Second Year** | | |
| Commerce 46A-46B | 3 | 3 |
| Merchandising 20 | 3 | -- |
| Merchandising 24B | -- | 3 |
| Secretarial Training 3A | 3 | -- |
| Commerce 18A-18B | 3 | 3 |
| *Commerce 45A-45B | 3 | 3 |
| Social Science 45 | -- | 3 |
| Elective | -- | 1 |
| Physical Education | ½ | ½ |
| | 15½ | 16½ |

## TWO-YEAR CURRICULUM IN SECRETARIAL TRAINING

| First Year | *Units* *Sem. I* | *Units* *Sem. II* |
|---|---|---|
| Commerce 41A-41B | 3 | 3 |
| Secretarial Training A | 1 | -- |
| English 8 | 3 | -- |
| English Elective | -- | 3 |
| Secretarial Training 1A-1B | 3 | 3 |
| Secretarial Training 5A-5B | 5 | 5 |
| Health Education 1 or 2 | -- | 2 |
| Physical Education | ½ | ½ |
| | 15½ | 16½ |
| **Second Year** | | |
| *Physical Science 40 or equivalent | 3 | -- |
| *Biological Science 40 or equivalent | -- | 3 |
| Commerce 18A-18B | -- | 3 |
| *Commerce 45A-45B | 3 | 3 |
| Secretarial Training 6A-6B | 3 | 3 |
| Secretarial Training 3A | 3 | -- |
| Social Science 45 | -- | 3 |
| Physical Education | ½ | ½ |
| | 15½ | 15½ |

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* Students qualified for regular four-year standing should take the equivalent course provided for regular students.

# COURSE OF INSTRUCTION

## ASTRONOMY

### 40. Elementary Astronomy

A survey course planned to acquaint the student with the more important facts pertaining to both the solar system and to the stars. The first part of the course is devoted to the study of the earth as an astronomical body and to the other planets. The latter part is devoted to a study of the sun and stars.

Spring (3)

## BIOLOGY

### 40. Man and His Biological World

A survey of the general field of biology with emphasis on the role of biological science in the welfare of man and his associates, consisting of three lectures and one demonstration period per week.

Fall and Spring (3)

## COMMERCE

### 40A-40B. Elementary Accounting

An introductory course in the fundamental principles of accounting; recording business transactions; opening and closing books of different kinds of business in accordance with modern accounting practice; accounting theory combined with actual practice. Balance sheet; profit and loss statements; accounts; book of entry, etc. Planned for students entering accounting work who must confine their preparation to one or two years.

Year course (3-3)

### 41A-41B. Secretarial Accounting

A course in secretarial accounting covering the fundamental principles of accounting and the application of these principles to the accounting work required by one employed in a secretarial capacity.

Year course (3-3)

### 45A-45B. Business Economics

A basic course in the general principles of business economics and the application of these principles to current problems of man's economic life. A coordinated description of economic conditions, circumstances and forces which are of general significance throughout the business world. The development of theory as an interpretation of and guide to practice. Emphasis placed on actual business and financial operations and matters of everyday business experience which may serve as guides for individual conduct and the development of social policy. Human wants and their satisfaction; organization and purpose of business; risks and insurance; how prices are determined; money, credit and banking; taxation; principles of consumption; government and business; wealth, value, capital, rent, interest profits; etc. Not open to freshmen.

Year course (3-3)

### 46A-46B. Record Keeping

An advanced course in the application of accounting theory and principles to accounting practice; the technical arrangement of accounting forms, records and reports found in business; advanced theory. Opportunity afforded students through the use of practice sets, etc. to secure practice in applying principles to actual work done in business. Prerequisite: Accounting 15A-15B or 16A-16B or Economics 14A-14B.

Year course (3-3)

## ENGLISH

### 0A. Beginning Composition

The elements of composition, including drill in grammar and usage; exercises in ocabulary building and careful reading; theme writing.

Fall and Spring (3)

### 0B. Freshman English

Composition stressing exposition. Reading from essays and articles. Prerequisites: Satisfactory Subject A test.

Fall and Spring (3)

### 0C. Freshman Literature

Literature, mainly contemporary, is read for its thoughts and ideas, especially n relation to human problems and their solution. Practice in writing is continued. rerequisite: One semester of Freshman English. Required of all Two-Year students.

Fall and Spring (3)

### 5. Sophomore English: Biography

Composition stressing personal narrative and informal essay. Reading from ield of biography and memoirs. Prerequisite: English 40A or 40B, and English 40C.

Spring (3)

### 6. Sophomore English: Contemporary Literature

Study of contemporary literature, with emphasis on various forms, such as the ovel, poetry, drama, etc., as used by the principal writers of the twentieth century orld. The main objective of the course is to give students a background for the ajor portion of their reading beyond college. Prerequisite: English 40A or 40B, nd English 40C.

Fall (3)

### 7. Sophomore English: Periodical Literature

Composition stressing the writing of essays and articles. Reading from current eriodical literature. Prerequisite: English 40A or 40B, and English 40C.

Fall (3)

## GEOGRAPHY

### 0A. Introduction to Geography: Fundamentals

This course deals with maps, weather and climate, landforms, vegetation and oils. It develops background for the study of countries and regions. One all-day ield trip is required.

Fall and Spring (3)

### 0B. Introduction to Geography: Countries and Regions

This course presents the regions of the world with a description of what man as done with the resources in each. It deals with human activity and distributions. rerequisite: Geography 40A.

Fall and Spring (3)

## GEOLOGY

### 0. General Geology

An elementary course dealing with those processes of nature by which the surface f the earth is built up, deformed and torn down. A study of the natural history and ccurrence of the common rocks and minerals.

Fall and Spring (3)

## HEALTH EDUCATION

### . Health and Social Adjustment (Men)

An informational course in personal and community hygiene. A study of social ygiene and the hygienic principles of living. Speakers from the County Medical ssociation on subjects of vital interest enrich the offerings of this course. It is specially desirable that this course be taken in the freshman year.

Fall and Spring (2)

**2. Health and Social Adjustment (Women)**

An informational course, reviewing the principles underlying the improvement o personal health, and the solution of practical problems of young women and prospectiv homemakers. Lectures by specialists in the various fields serve to enrich the course Required of all freshmen who are candidates for junior standing or the degree.

Fall and Spring (2)

**40A. Nutrition**

A course based on the study of how to make healthful food choices from th modern scientific viewpoint. Consideration is given to the meaning and indication of adequate nutrition and to food in its relationship to the maintenance of well-being Red Cross Nutrition Certificate is granted upon course completion. Open only t students enrolled in a two-year curriculum.

Fall (2)

**40B. Nutrition-Laboratory**

A practical course in the selection and preparation of typical foods. Emphasi is placed on the conservation of essential food flavors and nutrients. Class meets onc a week and is open only to students who have registered in Nutrition 40A.

Fall (1)

## MATHEMATICS

**40. Computational Mathematics**

Basic work in arithmetic, informal geometry, elementary algebra, and simpl trigonometry. The chief emphasis is placed on computation. Not open for credit t students who already have credit in elementary geometry, whether taken in hig school or in college.

Fall and Spring (3)

## MUSIC

**40A-40B. Music for Enjoyment**

A course designed for students with little or no musical background. Lecture and discussions as a basis for intelligent listening to concerts, radio programs, an class presentation of recorded music. Not open to music majors and minors.

Year course (1-1)

## PHYSICAL SCIENCE

**40. Man and His Physical World**

A brief survey of the nature of the scientific method and of selected topics i physical science. Materials will be chosen from physics, chemistry, astronomy, an geology in order to give some background for an understanding of the relations o physical science to modern life. Not open to students who have had both high schoo or college physics and chemistry or either of these subjects together with eithe astronomy or geology.

Fall and Spring (3)

## PSYCHOLOGY

**40. Psychology and Life**

An elementary survey of normal adult psychology, focused upon psychologica principles in relation to life situations. Open only to students enrolled in a two-yea curriculum.

Fall and Spring (3)

## SOCIAL SCIENCE

**40. Contemporary Problems**

A survey of the major political, social, and economic forces in modern America life. Chief problems are analyzed in relation to their setting, and students are give sound methods of approach in dealing with them.

Fall (3)

### 45. American Democracy

The structure and function of government, as it relates to individual Americans. Special emphasis on popular participation through voting, political parties, pressure groups, and public opinion. Prerequisite: Sophomore Standing.

Spring (3)

## SOCIOLOGY

### 45. Marriage and the Family

The purpose of this course is to prepare young people for successful marriage and family life. The development of the personality through family relationships, the choice of a life partner, and the social and economic factors involved in the establishment of a home, are given special emphasis. The importance of the family as a unit in larger social groupings is stressed, and both psychological and material factors which affect the welfare of family members are brought to the student's attention. Prerequisite: Sophomore Standing.

Spring (3)

## SPEECH ARTS

### 40. Fundamentals of Public Speaking

Training in fundamental processes of oral expression; practice in organization and presentation of material; emphasis upon speech in daily situations, including public discussion, conversation, recitation, extemporaneous speaking, and short speeches for special occasions.

Fall (3)

# DIRECTORY

## (1945-46)

HEPNER, WALTER R.------------------------------------------------President

A.B., 1913, M.A., 1916, EdD., 1937, University of Southern California. At San Diego State College since 1935.

ADAMS, JOHN R.----------------------------------------Professor of English

A.B., 1920, A.M., 1922, University of Michigan; Ph.D., 1940, University of Southern California. At San Diego State College since 1928.

ALCORN, MARVIN DOUGLAS--------------Assistant Professor of Education; Director of Teacher Placement

A.B., 1925, Southwestern College; A.M., 1931, Teachers College, Columbia University; Ed.D., 1942, University of Southern California. At San Diego State College since 1941.

AMSDEN, GEORGIA C.----------------------Associate Professor of Commerce

Diploma, Gregg School, Chicago. At San Diego State College since 1925.

AULT, JESSE W.------------------------------Dean of Professional Education, Professor of Education

B.S., B.Pd., 1910, Valparaiso University; M.A., 1925, University of South Dakota. One year graduate study since 1925 at Claremont Colleges and University of Southern California. At San Diego State College since 1925.

BACON, GUINIVERE KOTTER (Mrs. George)—Supervisor of Student Teaching; Associate Professor of Education

B.S., Utah Agricultural College; M.A., Stanford University. One year graduate study since 1926 at Stanford University, Teachers College of Columbia University, University of Southern California, and University of California at Los Angeles. At San Diego State College since 1928.

BAIRD, OSCAR---------------------------------------------Professor of Physics

B.A., 1910, University of Wisconsin; M.A., 1924, University of California. Three years graduate study since 1924 at University of Minnesota, University of California, University of Southern California, University of Oregon. At San Diego State College since 1921.

BAKER, ALICE G.-----------------------------Assistant in Physical Education

B.S., University of California at Los Angeles. At San Diego State College since 1945.

BAKER, CLIFFORD HENRY, Jr.------------Instructor in Spanish and French

B.A., 1933, San Diego State College; M.A., 1935, University of California. Two years graduate study since 1935 at University of California. At San Diego State College since 1937.

BARNHART, KENNETH EDWIN--------------Associate Professor of Sociology

A.B., 1915, Southwestern University; A.M., 1920; Southern Methodist University; Ph.D., 1924, University of Chicago. At San Diego State College since 1939.

*BENNETT, MURIEL------------------------Instructor in Physical Education

B.A., Pomona College; M.A., Claremont Colleges. One-half year graduate study since 1936 at Claremont Colleges and University of California at Los Angeles. At San Diego State College since 1936.

*BLAKE, DEAN-----------------------------------Instructor in Meteorology

Meteorologist, U. S. Weather Bureau. At San Diego State College since 1927.

*BROMLEY, J. PHILIP------------------------Assistant Professor of Commerce

B.S., 1934, M.S., 1936, University of Southern California. One year graduate study since 1936 at University of Southern California, Columbia University, and Texas Agricultural and Mechanical College. At San Diego State College since 1936.

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* On leave

BROOKS, BAYLOR .................... Assistant Professor of Geology

B.A., 1928, Stanford University. Two years graduate study since 1928 at University of Arizona and Stanford University. At San Diego State College since 1931.

BROWN, ELIZABETH (Mrs. Leslie P.) .................... Associate Professor of French

Ph.B., M.A., Ph.D., University of Chicago. At San Diego State College since 1926.

BROWN, LESLIE PARKER .................... Professor of Spanish and French

B.A., 1912, Yale College; M.A., 1913, Harvard University; Ph.D., 1935, University of Southern California. At San Diego State College since 1922.

BRYDEGAARD, MARGUERITE ANNA .................... Supervisor of Student Teaching;
Assistant Professor of Education

A.B., San Diego State College; M.A., Claremont Colleges. At San Diego State College since 1936.

CAMERON, ROY ERNEST .................... Professor of Economics

A.B., 1922, Ph.D., 1929, University of California. At San Diego State College since 1929.

CORBETT, KATHERINE E. .................... Supervisor of Student Teaching;
Associate Professor of Education

B.Pd., Michigan State College; B.S., M.A., Teachers' College, Columbia University. At San Diego State College since 1921.

CROUCH, JAMES ENSIGN .................... Professor of Biology

B.S., 1930, M.S., 1931, Cornell University; Ph.D., 1939, University of Southern California. At San Diego State College since 1932.

DARSIE, MARVIN LLOYD, JR. .................... Instructor in Biology

A.B., 1934, University of California at Los Angeles; Ph.D., 1939, Stanford University. At San Diego State College since 1939.

DEPUTY, ERBY CHESTER .................... Professor of Education

B.A., 1922, University of Denver; M.A., 1926, Ph.D., 1929, Columbia University. At San Diego State College since 1931.

DICKHAUT, FLORENCE LILLIAN SMITH (Mrs. Charles A.)
Professor of English

B.A., Northwestern University; M.A., University of Chicago. At San Diego State College since 1917.

EVANS, BRYANT F. .................... Instructor in Journalism

B.J., 1931, University of Missouri. On editorial staff of San Diego Union. At San Diego State College since 1945.

GLEASON, JOHN MORTIMER .................... Assistant Professor of Mathematics

B.A., 1929, University of California at Los Angeles; M.A., 1930, University of California. One and a half years graduate study since 1930 at University of Southern California, University of California at Los Angeles and Claremont Colleges. At San Diego State College since 1930.

GULICK, SIDNEY .................... Associate Professor of English

A.B., 1925, A.M., 1927, Oberlin; Ph.D., 1931, Yale University. At San Diego State College since 1945.

HAMANN, ILSE HEDWIG .................... Assistant Professor of Art

B.E., University of California at Los Angeles. M.A., Columbia University. At San Diego State College since 1934.

HAMMACK, EDITH CHASTAIN .................... Supervisor of Student Teaching;
Associate Professor of Education

B.A., San Jose State College. At San Diego State College since 1911.

HAMMACK, ISABELLA STEWART .................... Supervisor of Student Teaching;
Assistant Professor of Education

B.A., M.A., University of California. One-half year graduate study since 1929 at University of California. At San Diego State College since 1936.

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† On military leave

HARVEY, DOROTHY R. (Mrs. F. A.)------------Assistant Professor in Botany

B.A., San Diego State College; M.A., University of Southern California. One year graduate study since 1928 at University of Southern California and University of Chicago. At San Diego State College since 1924.

HARWOOD, ROBERT DANIEL------------------------Professor of Zoology

A.B., 1920, Pomona College; Ph.D., 1928, Cornell University. At San Diego State College since 1928.

HASKELL, HARRIET-----------------------------------Instructor in English

A.B., Mills; A.M., Bryn Mawr; Ph.D., University of Wisconsin. At San Diego State College since 1945. In S. D. Junior College at S. D. S. C. 1940-1943.

HOUSER, LOWELL D.-------------------------------------Instructor in Art

Diploma, 1924, Chicago Art Institute. Five years' special study since 1924 in Mexico, Yucatan, Haiti, and New York City. At San Diego State College since 1938.

HUNTER, JAMES J.-----------------------Director of Secondary Education;
Associate Professor of Education

A.B., 1932, Cornell University; M.S., 1936, Ph.D., 1940, Syracuse University.

HUFF, GEORGE D.-----------------Associate Professor of Health and Hygiene

M.D., 1924, University of Texas. At San Diego State College since 1939.

JACKSON, EVERETT GEE-----------------------------------Professor of Art

B.A., 1930, San Diego State College. Three years special study in Mexico. M.A., 1939, University of Southern California. At San Diego State College since 1930.

JOHNSON, FRANK LOUIS------------------Assistant Professor in English

B.A., 1928, M.A., 1929, University of Minnesota; Ph.D., 1934, University of Wisconsin. At San Diego State College since 1939.

JOHNSON, MYRTLE-------------------------------------Professor of Biology

B.S., M.S., Ph.D., University of California. At San Diego State College since 1921.

JONES, SYBIL ELIZA---------------------Assistant Professor of Speech Arts

B.L., M.L., University of California. Two years special study since 1907. At San Diego State College since 1925.

KEENEY, JOSEPH SUMNER-----------------Associate Professor of English

B.A., 1921, Yale College; M.A., 1928, Ph.D., 1933, University of California. At San Diego State College since 1933.

KELLY, GENEVIEVE------------------------Assistant Professor of Sociology

B.A., University of California; M.A., Columbia University. At San Diego State College since 1924.

KENNEDY, CHESTER BARRETT-------------Assistant Professor of English

B.A., 1927, Chico State College; M.A., 1939, Stanford University. Two and one-half years graduate study since 1928 at Stanford University and the University of California. At San Diego State College since 1937.

KITZINGER, ANGELA MAE----------Assistant Professor of Physical Education

A.B., Barnard College; M.A., Teachers College, Columbia University. Year of additional work at Central School of Hygiene and Physical Education and at Gymnastic Institute, Ollerup, Denmark. At San Diego since 1945.

LEIB, JULIUS----------------------------------Assistant Professor of Music

Three years special study at Leipzig Conservatory. At San Diego State College since 1938.

LEONARD, CHARLES B.--------------------------------Professor of History

B.A., 1921, M.A., 1922, Ph.D., 1929, University of California. At San Diego State College since 1921.

LESLEY, LEWIS B.------------------------------------Professor of History

B.A., 1920, Stanford University; M.A., 1923, Ph.D., 1933, University of California. At San Diego State College since 1924.

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† On military leave

INLEY, JAMES------------------------------Assistant Professor of Education

Ph.B., 1927, University of Chicago; M.S., 1934, Ph.D., 1938, University of Southern California. At San Diego State College since 1945.

IVINGSTON, GEORGE ROBERT--------------------Professor of Mathematics

B.S., 1910, M.A., 1922, University of California. One year graduate study since 1922 at University of California and University of California at Los Angeles. At San Diego State College since 1921.

UCIO, WILLIAM HOWARD-----------Principal of Campus Elementary School
Assistant Professor of Education

A.B., 1934, M.A., 1937, Ph.D., 1943, University of California. At San Diego State College since 1939.

IADDEN, RICHARD--Director of Elementary Education; Professor of Education

B.A., 1926, Nebraska (Peru) State Teachers College; M.A., 1930, Ph.D., 1931, Columbia University. At San Diego State College since 1939.

IEAD, HUNTER---------------Assistant Professor of Philosophy and Psychology

B.A., 1930, Pomona College; M.A., 1933, Claremont Colleges; Ph.D., 1936, University of Southern California. At San Diego State College since 1941.

IENDENHALL, MARY------Dean of Women; Professor of Educational Guidance

B.A., University of Colorado; M.A., University of Southern California; Ph.D., Yale University. At San Diego State College since 1939.

IOE, CHESNEY R.------------------------------Associate Professor of Physics

B.A., 1929, M.A., 1931, Stanford University; Ph.D., 1941, University of Southern California. At San Diego State College since 1931.

ASATIR, ABRAHAM PHINEAS------------------------Professor of History

B.A., 1921, M.A., 1922, Ph.D., 1926, University of California. At San Diego State College since 1928.

ICHOLS, AMBROSE R., Jr.-----------------Assistant Professor of Chemistry

B.S., 1935, University of California; Ph.D., 1939, University of Wisconsin. At San Diego State College since 1939.

RYDEGAARD, MARGUERITE ANNA (Mrs.)--Supervisor of Student Training;
Assistant Professor of Education

B.A., San Diego State College; M.A., Claremont Colleges. At San Diego State College since 1936.

SBORN, CLARENCE G.-----Associate Professor of History and Political Science

B.A., 1926, M.A., 1927, Ph.D., 1935, Stanford University. At San Diego State College since 1937.

PATTERSON, LENA E.-------------------------------------Professor of Art

A.B., B.S., Ohio University. M.A., Columbia University. One year graduate study since 1918 in Berlin, Vienna, Paris, London. At San Diego State College since 1933.

PEASE, ESTHER ELIZABETH --------Assistant Professor of Physical Education

B.A., University of California at Los Angeles. One year graduate study at University of California at Los Angeles, University of Southern California, and Mills College and one year European study in the dance since 1931. At San Diego State College since 1939.

PEIFFER, HERBERT C., Jr.-----------Dean of Student Personnel and Guidance;
Associate Professor of Psychology

A.B., 1928, University of California at Los Angeles; M.A., 1931, Ph.D., 1939, Stanford University. Appointed Junior College 1937. At San Diego State College since 1941.

PERRY, FAY V. (Mrs. J. M.)------Director of Guidance for Two-Year Students;
Associate Professor of Sociology

B.A., San Diego State College; M.A., Ed.D., University of Southern California. Appointed Junior College 1936. At San Diego State College since 1940.

PETERSON, CHARLES E.---------Dean of Men; Professor of Physical Education

A.B., 1928, San Diego State College; M.A., 1937, Claremont Colleges. At San Diego State College since 1921.

PFAFF, PAUL LEWIS______________________Associate Professor of Speech Art

B.A., 1929, Stanford University; M.A., 1937, University of Southern California. Two years study since 1937 at University of Southern California. At Sa Diego State College since 1931.

PHILLIPS, WALTER THOMAS______________Professor of Spanish and Frenc

A.B., 1925, University of Washington; M.A., 1926, Stanford University; Ph.D. 1943, University of Southern California. Graduate study at National Uni versity of Mexico, Institute of French Education, Middlebury College Italia School. At San Diego State College since 1927.

POST, LAUREN CHESTER_________________Associate Professor of Geograph

A.B., 1924, M.A., 1931, Ph.D., 1937, University of California. At San Dieg State College since 1937.

REDIT, EDITH ESTHER____________________Supervisor of Student Teaching
Assistant Professor of Educatio

B.A., M.A., University of California. At San Diego State College since 1938

RICHARDSON, ROBERT WILLIAM__________Assistant Professor of Geograph

B.A., 1930, Ph.D., 1943, University of California. At San Diego State Colleg since 1939.

ROBINSON, DUDLEY HUGH__________________________Professor of Chemistr

B.A., 1927, Louisiana State University; M.S., 1932, University of Iowa; Ph.D. 1942, University of Southern California. At San Diego State College sinc 1928.

ROGERS, SPENCER LEE__________________Associate Professor of Anthropolog

B.A., 1927, San Diego State College; M.A., 1930, Claremont Colleges; Ph.D. 1937, University of Southern California. At San Diego State College since 1930

ROSS, MELVYN K.________________________Instructor in Physics and Chemistry

A.B., 1939, San Diego State College; M.S., 1942, and two years of graduate study at University of Southern California. At San Diego State College since 1942.

SANDERS, VIOLA______Supervisor of Student Teaching; Instructor in Education

A.B., San Diego State College; M.A., Claremont Colleges. At San Diego State College since 1945.

SCHWOB, MARION LYON (Mrs. W. E.)________________Associate Professor of
Physical Education

B.A., University of Iowa; M.S., University of Southern California. At San Diego State College since 1934.

†SHAFER, FLORENCE I.____________Assistant Professor of Physical Education

B.A., University of California; M.S., University of Southern California. At San Diego State College since 1933.

SMITH, CHARLES ROBERTS________Assistant Professor of Physical Education

B.A., 1931, San Diego State College. One year graduate study since 1931 at University of Southern California. At San Diego State College since 1933.

SMITH, CLIFFORD EDWARD______________Associate Professor of Astronomy

B.A., 1923, Carleton College; M.A., 1926, Swarthmore College; Ph.D., 1936, University of California. At San Diego State College since 1937.

SMITH, DEANE FRANKLIN____________________Assistant Professor of Music

B.Mus., 1931, M.Mus., 1939, Northwestern University. At San Diego State College since 1939.

SMITH, LEILA DEBORAH________________________________Professor of Music

A.B., Oberlin College; M.Mus., Oberlin Conservatory; M. A., Columbia University. One-half year study since 1926 at Stanford University and Northwestern University. At San Diego State College since 1922.

SPRINGSTON, CHRISTINE_____________________Associate Professor of Music

B.A., B.M., University of Redlands; M.A., University of Washington. Diplomée d'execution, Conservatoire Americain, Fontainebleau, France. At San Diego State College since 1930.

---

† On military leave

TEINMETZ, HARRY CHARLES____________Associate Professor of Psychology

B.A., 1924, M.A., 1927, University of California. Two years graduate study since 1927 at Stanford University, University of California, and Purdue University. At San Diego State College since 1930.

TONE, JOHN PAUL____Head Librarian; Associate Professor of Library Science

B.S., 1926, Northwest Missouri State Teachers College; B.S., 1929, M.S., 1930, University of Illinois. Ph.D., 1945, University of Chicago. At San Diego State College since 1930.

TORM, ALVENA (Mrs. Eugene)_____________Associate Professor of Geography

A.B., A.M., University of California. At San Diego State College since 1926.

SWANSON, CHARLES EDMUND_________Instructor in English (Journalism)

B.A., 1941, San Diego State College. At San Diego State College since 1938.

ERRY, WILLIAM L.________________Assistant Professor of Physical Education

A.B., 1930, Western Kentucky State Teachers College; M.S., 1932, Indiana University; two years additional study at University of Kentucky and University of Illinois. At San Diego State College since 1946.

RAIL, MABEL COY__________________________Assistant Professor of English

B.A., Parsons College; M.A., State University of Iowa. Two years graduate study since 1927 at University of Southern California. Appointed Junior College 1935. At San Diego State College since 1940.

UCKER, GORDON H.__________________________Associate Professor of Biology

B.S., 1931, M.S., 1934, University of South Carolina; Ph.D., 1934, University of North Carolina. At San Jose State College since 1945.

VALKER, HILDE KRAMER (Mrs.)___________Assistant Professor of German

B.A., M.A., Northwestern University. At San Diego State College since 1931.

VALLING, CURTIS R.______Assistant Professor of Mathematics and Engineering

B.A., 1925, E.E., 1926, Stanford University. One and a half years graduate study since 1926 at Stanford University and University of Southern California. At San Diego State College since 1931.

VATENPAUGH, FRANK M.__________________Assistant Professor of Commerce

A.B., 1916, Pomona College; M.A., 1931, University of Southern California. Two years graduate study since 1931 at University of Southern California and University of Oregon. Appointed Junior College 1935. At San Diego State College since 1940.

VATSON, DONALD R.____________________________Dean of General Education
Associate Professor of Physical Science

B.A., 1924, B.S., 1925, M.A., 1927, Ed.D., 1940, University of Southern California. At San Diego State College since 1939.

VRIGHT, WILLIAM H.______________________________Professor of Commerce

B.S., 1917, M.A., 1928, University of California, Ph.D., 1943, University of Southern California. At San Diego State College since 1921.

VURFEL, SEYMOUR WALTER___________________________Instructor in Law

B.A., 1927, Pomona College; LL.B., 1930, Harvard University. At San Diego State College since 1938.

OUNG, CARL HAVEN_____________Assistant Professor of Physical Education

B.A., 1925, Pomona College; M.A., 1935, University of Southern California. Two years graduate study since 1935 at Stanford University. At San Diego State College since 1939.

---

* On leave

## AFFILIATED CITY SCHOOLS

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Floyd A. Johnson, Principal----Herbert Hoover High School

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Margaret Helen Demcray, A.B. and Certificate in Librarianship--Senior Librarian

Lulu Germann, B.S.----Senior Librarian

V. Ruth Dickison----Typist-Clerk

Marion Grant----Secretary to Librarian

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Genevieve Kelly, A.M.----Senior Librarian

*Elsie L. Roy, A.B.----Senior Librarian

Harriet B. Stovall----Senior Librarian

†Winifred Smith----Library Clerk

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†Mildred Ann Robertson----Secretary to Employment-Placement Office

Florence Schneider----PBX Operator

Marjory M. Thorn----Statistician

Florence Wiggins----Secretary of the Campus Elementary School

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Timothy Hallahan----Supervisor of Buildings and Grounds (after July 1, 1946)

William Duns----Head Gardener

Myrlen Southworth----Engineer

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* On leave

† On military leave

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# SAN DIEGO STATE COLLEGE

## BULLETIN

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THE GREAT SEAL OF THE STATE OF CALIFORNIA

FOR THE YEAR 1948-1949

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# BULLETIN

## and Announcement of Courses

VOLUME 35

JUNE, 1948

SAN DIEGO STATE COLLEGE

SAN DIEGO, CALIFORNIA

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# *1948*

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# *1949*

## JANUARY

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## FEBRUARY

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## MARCH

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## APRIL

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| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

## MAY

| S | M | T | W | T | F | S |
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| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | — | — | — | — |

## JUNE

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| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | — | — |

## JULY

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| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | — | — | — | — | — | — |

## AUGUST

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
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| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | — | — | — |

## SEPTEMBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
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| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | — |

## OCTOBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
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| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | — | — | — | — | — |

## NOVEMBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| — | — | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | — | — | — |

## DECEMBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
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| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

# CALENDAR 1948-1949

## SUMMER SESSION, 1948

Term I —June 21-July 30
Term II —August 2-Septmeber 3
Term IIA—August 2-20

## FALL SEMESTER, 1948-1949

| | |
|---|---|
| August 1 | Applications for admission must be filed on or before this date. |
| August 11 or 28 | Qualifying examinations for all entering students.<br>August 11 (12.30 p.m. to 4.30 p.m.)<br>August 28 (8.30 a.m. to 12.30 p.m.) |
| September 10 | First day of Orientation Program. All entering freshmen are required to be on the campus from 8.30 a.m. until 3 p.m. All other new students are strongly urged to attend. |
| September 11 | Second day of Orientation Program. All entering freshmen are required to be on the campus from 8.30 a.m. until 3 p.m. All other new students are strongly urged to attend. |
| September 11 | Fundamentals Test (8.30 a.m. to 12 m.)<br>General Culture Test (1 p.m. to 4.30 p.m.) |
| September 13-14 | Registration and payment of fees. |
| September 15 | Instruction begins. Late registration fee becomes effective. |
| September 27 | Last date for late registration. |
| October 15 | Applications for admission to teacher education in Little Theatre, 11 a.m. |
| November 5 | Last date for withdrawal from classes. |
| November 11 | Armistice Day holiday. |
| November 25-27 | Thanksgiving recess. |
| December 11 | Last date for filing applications for mid-year graduation. |
| December 18 | Last day before Christmas recess begins. |
| January 3 | Classwork resumes. |
| January 19-26 | Semester examinations. |
| January 26 | Semester ends. |

## SPRING SEMESTER, 1948-1949

| | |
|---|---|
| January 3 | Applications for admission must be filed on or before this date. |
| January 15 | Qualifying examinations for all entering students. (8.30 a.m. to 12.30 p.m.) |
| February 1 | First day of Orientation Program. All entering freshmen are required to be on the campus from 8.30 a.m. until 3 p.m. All other new students are strongly urged to attend. |
| February 1 | Fundamentals Test (8.30 a.m. to 12 m.)<br>General Culture Test (1 p.m. to 4.30 p.m.) |
| February 2 | Second day of Orientation Program. All entering freshmen are required to be on the campus from 8.30 a.m. until 3 p.m. All other new students are strongly urged to attend. |
| February 2-3 | Registration and payment of fees. |
| February 4 | Instruction begins. Late registration fee becomes effective. |
| February 14 | Last date for late registration. |
| February 25 | Applications for admission to teacher education in Little Theatre, 11 a.m. |
| March 25 | Last date for withdrawal from classes. |
| April 11-16 | Spring recess. |
| April 30 | Last date for filing applications for graduation. |
| May 30 | Memorial Day holiday. |
| June 2-9 | Semester examinations. |
| June 9 | Semester ends. |
| June 10 | Commencement. |

## SUMMER SESSION, 1949

Term I —June 20-July 29
Term II —August 1-September 2
Term IIA—August 1-19

# FUNCTIONS OF THE STATE COLLEGES

The state colleges have three major functions, namely: (1) To help the individual student to develop a well-rounded and adjusted personality; (2) to promote civic intelligence and competence; and (3) to create supplies of trained men and women, some to serve as teachers in the elementary and secondary schools, some to fill intermediate places of leadership, and some to transfer to graduate institutions to equip themselves to extend the frontiers of knowledge and to occupy the higher positions of leadership. In terms of publicly supported higher education, the state colleges and the university together make provision for the realization of all the essential objectives of higher education in our State.

To achieve their unique purposes the state colleges have developed and are improving offerings as follows:

1. Teacher education curricula for those students who plan to teach in the elementary school, the junior high school, and in secondary schools.
2. Preprofessional curricula.
3. Curricula of varying lengths in such fields as business, industry, governmental services, homemaking, and social service.
4. General education for students who take work which leads toward the bachelor of arts degree or to the higher professions through graduate work.
5. Guidance services to assist the individual student to plan his educational program and to make his college and life adjustments.
6. Extension courses in appropriate fields.

The state colleges accept the principle that higher education should be available to all capable high school graduates. The preservation and improvement of democracy depends upon the full and unhampered development of all potential citizenship and leadership resources. In keeping with this principle the state colleges maintain flexible entrance requirements. Each applicant is treated individually in terms of his potential capacity and his potential contribution and not in terms of past academic pattern or accomplishment alone.

The state colleges purposely maintain not only flexible entrance requirements, but also, adjustive curricula, and adequate and effective guidance and counseling services to promote the personal and educational development of worthy students. The state colleges modify traditional academic restrictions and provide new curricula and services whenever such modifications and additions seem to serve the legitimate desirable needs of indiivduals and society.

The promotion of civic intelligence and competence is the underlying aim of all activities on state college campuses. Special emphasis centers on warm personal relationships between instructors and students, on friendly counsel in time of need, and on the day-to-day routine of living in a friendly atmosphere. Because the majority of state college students live at home, it is possible to link together the college, the home, and the community in realistic democratic relationships.

The democratic controls exercised over the state colleges make them readily and effectively responsive to individual and community needs and encourage them continuously to make significant improvements in both curriculum and personal services. The state colleges are thus laboratories in which the facts and theories developed in research, in community living, and in daily association with students are reflected in the instructional program.

The state colleges plan their program of higher education so as to provide educational services inherent in the principle of equality of opportunity.

# THE COLLEGE

## LOCATION AND ENVIRONMENT

Renowned as a winter resort with a mild but invigorating climate, San Diego ias become equally famous for its cool summers. High cultural standards in art, nusic, literature, and science create a stimulating environment for a college. Many f these advantages are to be found in the heritage resulting from the expositions of 915-16 and 1935-36, including the buildings themselves, which portray the best types f Spanish colonial art and architecture. Housed in these buildings are the Fine Arts allery, exhibits in anthropology, natural history, and American archaeology, which re in many respects unsurpassed. The outdoor organ, the Ford Bowl, and the hortiultural gardens make Balboa Park, in which all these facilities are located, world enowned. The Scripps Institute of Oceanography, operated by the University of alifornia at La Jolla, gives opportunity for important cooperation in the biological ciences.

## BUILDINGS AND EQUIPMENT

On February 1, 1931, the college was moved to the new campus, located one mile orth of the city's principal east-west boulevard, El Cajon Boulevard. The buildings re of Spanish-Moorish architecture which is well suited to the landscape and climate f this region. They include the Academic Building (which houses lecture halls, lassrooms and administrative offices); the Science Building; the Library; the Little heater; the Music Building; the Campus Elementary School; Scripps Cottage a social clubhouse for women students); the Cafe and Book Store; and the Physical ducation Building (a structure with adequate facilities for both men and women). he gymnasium contains a very fine basketball floor with stands that will accomodate 1,500 spectators. A fine concrete stadium, constructed in a natural site, has seating capacity that is adequate for present needs. The open air theater, seating ,200 persons, serves as a meeting place for large groups.

## FACILITIES FOR THE EDUCATION OF TEACHERS

The college maintains a modern elementary school on the campus where it has eveloped an extensive program for the education of elementary school teachers. he classroom-laboratory plan which calls for the use of work-rooms, the library, nd shops, affords unusual opportunities for the induction of students into teaching. y arrangement with the San Diego city schools, directed teaching is provided in the lementary and secondary schools.

## THE FACULTY

The professional education of the faculty places the college at the 97 percentile osition among teacher education institutions of the Country. For listing and further etails see the directory on page 171.

## THE LIBRARY

The library facilities of this college are noteworthy for an institution of its ize. The library consists of well over 110,000 books and receives more than 700 ifferent periodicals selected to meet the requirements of a modern educational instiution. Professionally trained librarians are available to render assistance to students nd faculty in their reading and reference work.

The Campus Elementary School Library, representing a collection of 14,000 olumes, possesses equipment and building facilities that are unique.

## LIVING ACCOMMODATIONS

Living arrangements for students whose homes are not in San Diego or within ommuting distance are made through the offices of the Dean of Women or the Dean of en. Women students are urged to live in the residence hall adjoining the campus. areful consideration is given to study conditions, healthful living, and adequate social pportunities. Room and board may be secured for approximately $275 per semester, ayable in four installments. Opportunities to reduce this figure by working a few ours each week are occasionally available. Reservations should be made in advance hrough the Manager of Quetzal Hall, 5192 College Avenue, San Diego 5, California. ingle women students under the age of 21 who find other accommodations more esirable must file with the Dean of Women a statement from the parent or guardian.

## VETERANS' EDUCATION AND HOUSING

The college has been approved by various accrediting agencies to offer courses for veterans leading toward the A.B. Degree in some 19 major fields and to the general Secondary Credential upon the completion of a graduate year. A veterans' office is maintained on the campus to facilitate registration, aid in the establishment of benefits, afford special counseling services, and serve as an information center. A joint student-faculty committee on veterans' affairs serves as a clearing house for suggestions relating to policies and procedures affecting veterans.

Through the City of San Diego, 400 family units formerly under the jurisdiction of the Federal Public Housing Authority have been made available to the college for the housing of its married veterans. These units are located some eight miles from the campus proper at Aztec Terrace, midway between Old Town and Loma Portal. Applications for housing at Aztec Terrace are made through the office of the Dean of Men.

## STUDENT LIFE

A rich field of extracurricular activities is available to the student throughout his college life. The student is urged to select these activities carefully in order that he may profit by such extra-class experiences without lowering his standards of scholarship. The *Student Handbook*, available at the time of registration, gives information concerning activities which include organizations in every department of the college, and opportunities for individual and group experience in the social, athletic, fraternal, religious and governmental life of the campus.

## STUDENT HEALTH SERVICE

The Health Department is maintained for the protection and care of student health. A complete physical examination is required of each student upon admission to college. Careful attention is given to cases undergoing remedial treatment or to cases in which a modification of study load or amount of participation in physical activities seem advisable.

A college physician and school nurse are available for consultation and emergency treatment. Students who have been absent over three days because of illness should receive clearance from the Health Office before returning to classes.

A group plan for accident insurance is in operation for students who desire t participate.

## PLACEMENT AND OCCUPATIONAL GUIDANCE SERVICE

A Placement and Occupational Guidance Office is maintained by the college t serve the needs of the students. The office staff assists students in choosing thei occupational goals and serves as a clearing house for part-time and full-time jobs both in industrial and teaching fields.

Standard tests are employed in the measurements of students' interests, capacities and traits. In addition, an occupational library is maintained to acquaint th student with the information needed relative to any chosen field.

An effort is made to place all students upon graduation. The staff maintains contact with employers in the field who in turn refer to the office for informatio concerning graduates or nongraduates whom they are considering for employment

Included in the service of the office are the listing of part-time jobs of all types available, including opportunities to work for room and board, and part-time or full time jobs in commerce and industry.

Confidential records for all graduates, both Liberal Arts and and teacher candidates, are kept in the office.

This service is free to students, who are invited to arrange for interviews wit members of the office staff. The Placement Secretary should be seen or called regardin vacancies or work applications.

## VOCATIONAL REHABILITATION SERVICE

The Bureau of Vocational Rehabilitation, California State Department of Education, offers its service to students who have an employment handicap resulting fro physical disability of any kind. Included are vocational counseling, the payment o tuition and fee, and the providing of textbooks without charge to the trainee. Detail of the service may be obtained from the Registrar's Office.

## SCHOLARSHIPS

A number of scholarships for both men and women has been made available through the efforts of the alumni, civic organizations, student organizations, business and professional groups and individuals, and other friends of the college. Superiority in ability and achievement, strength of character, and worthiness from the point of view of need are the standards upon which selection is based. Scholarship aid is limited for the most part to students who have completed at least one semester at the San Diego State College. Except for athletics grants-in-aid, which are initiated through the Director of Athletics, scholarship applications are made through the office of the Dean of Women.

Unless otherwise stipulated, all scholarship awards are determined and announced by the faculty Committee on Loans and Scholarships in October of the college year. Applications for scholarships for the fall semester must be filed with the office of the Dean of Women prior to October 15th. The scholarships available for 1948-1949:

**ALTRUSA CLUB.** Two scholarships of $50 each are made available annually by the Altrusa Club of San Diego. Applications are considered from women students enrolled in San Diego State College who are worthy and in need.

**AMERICAN ASSOCIATION OF UNIVERSITY WOMEN.** One scholarship of $100 is given each year in June to a graduating senior who will begin work in an accredited college or university toward a higher degree or credential. The scholarship is made available by the San Diego Branch of the American Association of University Women. Interviews with representatives of that organization are required.

**AMERICAN SOCIETY OF CIVIL ENGINEERS, SAN DIEGO SECTION.** A scholarship of $75 is awarded annually through the San Diego Section of the American Society of Civil Engineers to the engineering student selected for the scholarship on a basis of character, ability, personal qualities, and financial need. Nominations are made by the Engineering Department of the College. At least sophomore status is required for nomination.

**ANONYMOUS (B).** A scholarship of $100 is given each year to be divided among students in financial need, at the discretion of the faculty Loans and Scholarships Committee. The committee gives consideration to scholastic attainment, financial need, and character.

**ANONYMOUS (E).** A $50 scholarship, awarded each semester through the Loans and Scholarships Committee, is made available by a public spirited citizen who prefers to assist a student majoring in science.

**ART GUILD.** The Art Guild of San Diego State College awards a $25 scholarship each year to a student outstanding in the field of art.

**ASSOCIATION OF CHILD EDUCATION.** The Association of Child Education makes available each year a $50 scholarship to a student in the Kindergarten-Primary program. The award is customarily made to an upper division student showing promise in a particular field who is in need financially.

**CAP AND GOWN.** Two $50 scholarships are awarded annually to upper division women students who have attended San Diego State College for at least one year previous to date of making application and who have maintained at least a "B" average in scholarship for their entire college career. The scholarships are made available through the San Diego State College chapter of Cap and Gown.

**DAUGHTERS OF THE AMERICAN REVOLUTION.** Two scholarships of $25 each are presented each spring, one to a young man and the other to a young woman outstanding in citizenship and Americanism. Applicants should have at least a "B" average in scholarship, should be able to demonstrate need for financial assistance, and should have junior standing in the college when selected. The scholarships are made available through the Daughters of the American Revolution.

**INTERSORORITY COUNCIL.** A $50 scholarship, $25 each semester, is made available each year by the Intersorority Council of San Diego State College to the sorority woman applying with the highest grade point average. The applicant must be an upper division student carrying at least twelve units, and must have attended San Diego State College at least one year previous to the date of application.

**MARCY, MAY FINNEY.** Scholarships of varying amounts are awarded from time to time by the committee administering the May Finney Marcy Fund to selected San Diego State College students, preferably members of Cap and Gown. Inquiries concerning eligibility for these awards should be addressed to the Dean of Women.

**SAN DIEGO BASEBALL CLUB.** An annual scholarship of $250, made available by the San Diego Baseball Club, is distributed to San Diego State College athletes with a principal interest in baseball. Recipients are selected by the Director of Athletics of the college.

**SAN DIEGO CITY TEACHERS ASSOCIATION.** Two scholarships of $50 each are presented each year to prospective teachers with no restrictions as to college year. Applications are made on forms supplied by the San Diego City Teachers Association and are reviewed by the association's committee on scholarships. Personal interviews are required.

**SAN DIEGO COUNTY TEACHERS ASSOCIATION.** Two $50 scholarships, made available annually by the San Diego County Teachers Association, are awarded to students in the field of elementary education. Selections are made by the faculty Loans and Scholarships Committee.

**SAN DIEGO ENGINEERS CLUB.** A scholarship of $50 is given each semester by the San Diego Engineers Club to a student majoring in engineering who shows particular ability in that field. The Loans and Scholarships Committee recommends three candidates from all students applying, which candidates in turn are interviewed by the members of the Engineers Scholarship Committee, who make the final selection.

**SKULL AND DAGGER.** Skull and Dagger of the San Diego State College awards $25 annually to each of two students judged to possess superior talent in drama. Selections are made by Skull and Dagger.

**TAU ZETA RHO ALUMNAE.** A scholarship of $50 is given annually by the alumnae chapter of the Tau Zeta Rho sorority of the San Diego State College to a nonsorority woman student enrolled in either her junior or senior year of teacher training.

**THEATRE GUILD.** One or two $25 awards are made each year by the Theatre Guild of the San Diego State College. The guild selects students outstanding in theatrical work.

**WALKER, RALF MARC.** A scholarship in the amount of $500 is made available by the Walker-Scott Corporation in memory of the late Mr. Ralf Marc Walker to a woman student majoring in merchandising or retail trade at the San Diego State College. The scholarship is presented to a girl in Walker's Hi-Debber Council each year. The total scholarship is deposited in the San Diego State College Foundation and is handed to the recipient at the rate of $50 a semester for each of the first three years and $100 a semester for the two senior semesters.

**WEINBERGER, HENRY, INTERFAITH SCHOLARSHIP.** A scholarship of $100 is awarded in April of each year to the student of any religious faith enrolled at the San Diego State College who is judged to have done the most to further interfaith ideals among the students of the college during the year of the award. This scholarship is made available by Mr. Henry Weinberger of the Lasher Lodge of B'nai B'rith.

## ADDITIONAL DONORS

Additional donors to scholarship funds or to the San Diego State College Foundation include the following:

Al Bahr Temple
Associated Women Students
Nate Baranov
Del Mar Charities
John Fox
Percy Goodwin
Philip Gildred
E. T. Hale and Sons
Frances Heilbron
Mr. and Mrs. Wilbur Kelly
Milk Institute of San Diego County
Robert Ripley
San Diego Kiwanis Club
San Diego Lions Club
Fred Simpson
Lucian K. Small
Solof's, Ltd.
R. H. Sundberg
O. W. Todd, Jr.
Anonymous

## LOANS

Both long-term and short-term loans are available to students who have attended the San Diego State College for at least one semester and who have demonstrated ability to do satisfactory college work. Applications for loans are made to the Committee on Loans and Scholarships through the offices of the Dean of Men or Dean of Women.

# ADMISSION AND REGISTRATION

## GENERAL ADMISSION REQUIREMENTS

High school graduates and other applicants possessing equivalent preparation may be admitted to this college upon evidence of fitness to profit by college instruction, such fitness to be shown by previous scholastic records, by evidence of good moral character and personal qualifications, and by satisfactory scores on tests which the college may require. Due to crowded conditions the college probably will have to refuse all qualified applicants who do not file application blanks and official transcripts prior to the dates indicated in the calendar on page 5.

## ADMISSION OF HIGH SCHOOL GRADUATES

(1) A high school transcript must be presented showing satisfactory scholarship, and (2) applicants must demonstrate readiness for college instruction by making satisfactory scores on such tests as the college may designate.

**Regular status** will be granted if the student has earned A or B grades in not less than 16 semester courses in English, social sciences, foreign language, mathematics, natural sciences, and related fields, during the tenth, eleventh, and twelfth grades.

**Provisional status** will be granted if the student has earned A or B grades in not less than 12 semester courses of any type during the tenth, eleventh, and twelfth grades. Individuals who fall slightly below the above standard may be admitted to provisional status if qualifying examination scores indicate probable success in college. Transfer to regular status may be attained upon completion of 24 or more units of college work with grade average of C or better. Full credit is allowed for all regular college work completed.

**Adult special status** may be granted an applicant who is over 21 years of age or is a veteran of World War II, provided that he demonstrates through qualifying examinations satisfactory ability to do college work. Such students may be transferred to regular status upon removal of all matriculation deficiencies and after completion of 24 or more units of college work with grade average of C or better. Full credit is allowed for all regular college work completed.

## ADMISSION BY EXAMINATION

Certificates of successful examination before the College Entrance Examination Board will be accepted when candidates cannot meet the above scholarship requirements.

## SPECIAL STUDENTS

In exceptional cases, persons over 21 years of age or veterans of World War II who do not fully meet the college entrance requirements may be admitted as special students upon presentation of evidence showing good character and ability to do satisfactory work at this college. Non-high school graduates may be required to complete, in addition to the usual requirements for the A.B. Degree, three semester units of college work for each two semester courses lacking high school graduation. College graduate students who do not qualify for admission to graduate status (see admission to graduate status) may be admitted as special students.

## ADMISSION WITH ADVANCED STANDING

Credit earned in recognized institutions of collegiate grade will be evaluated and advanced standing allowed accordingly toward the graduation requirements of this institution. Applicants must show an average grade of C or better for all college work, for the last college attended, and for the last semester of attendance in order to qualify for regular status. A student who enters with advanced standing is one who has completed at least 15 units of passing work in another collegiate institution. However, no applicant may disregard his collegiate record and apply for admission only on the basis of his high school work. No credit earned after a student has accumulated 64 units of work in all types of collegiate institutions may be transferred from a junior college.

Students seeking admission with advanced standing must furnish complete tran scripts for all work attempted beyond the eighth grade. If an official evaluation is desired, a deposit of $2 must accompany the application and be received together with all transcripts at least 30 days before the date of registration. At least 45 semester units must be completed before a student may apply for an evaluation.

## ADMISSION TO GRADUATE STATUS

A student who holds a bachelor's degree from an accredited institution may be admitted upon application and the filing of official transcripts of all college work. A student not meeting these requirements in full may apply for admission as a special student.

Admission to graduate courses (numbered 200 to 299) is restricted to students (1) who hold a standard bachelor's degree from an accredited institution, (2) who receive a satisfactory score on graduate entrance examinations, (3) who meet the prerequisites for specific courses, and (4) who qualify under one of the following categories:

a. Admission to candidacy for the General Secondary Credential; or
b. Maintenance of a satisfactory grade point average in all postgraduate work; or
c. The course concerned is the first course taken from those numbered 200 to 299

## EXTENDED DAY PROGRAM

In order to meet the needs of adults in the community for certain types of college work, this institution offers late afternoon and evening classes under an extended day program. Most of these courses are on the upper division and graduate levels and all carry full college credit. Among the fields in which work is offered are: Education commerce, personnel work, and engineering. Courses may be set up to meet the need of a particular group who desire special instruction. Requests for such courses should be made through the office of the Dean of General Education. A special bulletin describing the current offerings is issued each semester from the above office.

## AUDITORS

Properly qualified persons may apply for admission to attend classes as auditors. Such students pay the same fees as those who take equivalent work for credit.

## TESTS REQUIRED AT REGISTRATION TIME AND LATER

1. A physical examination is required of all students entering or reentering the college after an absence of one semester or more, except that students carrying 6 units or less are not required to take the physical examination. This examination is scheduled during the orientation and registration period.

2. All entering students are required to take a college aptitude test. Exceptions may be made for graduate students and for those who register for five units or less and for those registered only in Extended Day classes.

3. All entering freshmen and college transfer students who present less than a minimum of 15 units of college credit must take the regular battery of achievement and aptitude tests. The freshman English course which a student will take will be determined by results of these tests.

4. Students entering teacher education should see admission requirements on page 25.

## LATE REGISTRATION

Students who register after the scheduled registration days are subject to a late registration fee of $1. Students may be accepted for late registration with the approval of the Reigstrar within two weeks after scheduled registration days. Registration will be closed after that date. Students failing to complete all registration requirements within the period allowed, as announced in registration instructions, are subject to cancellation of registration.

## CHANGES IN REGISTRATION

Petitions for changes in program may be secured at the Registrar's office. A fee is charged for changes in program after registration books are filed.

# FEES AND EXPENSES

## PROBABLE EXPENSES FOR ONE SEMESTER

An estimate of the expense of attendance for one semester is given below. No estimate is made as to the cost of clothing, or other personal items, since these figures vary with the demands of the individual. Laboratory fees are additional.

### A Partial Estimate of Expenses

One Semester

| | *Minimum* | *Maximum* |
|---|---|---|
| Fees and deposits | $23.50 | $30.50 |
| Books | 18.00 | 30.00 |
| Board and room | 275.00 | ---- |
| Transportation, lunches, incidentals | 20.00 | 60.00 |
| Miscellaneous | | 5.00 |

Before enrolling in college, the student should possess sufficient resources to meet he minimum expenses for one semester. A limited amount of clerical work in offices and in the library may be offered from time to time but ordinarily it is not sufficiently remunerative to reduce expenses materially.

## LIST OF FEES AND DEPOSITS (SUBJECT TO REVISION)

### Enrollment Fees and Deposits

(Payable at time of registration)

| | |
|---|---|
| By all students: | |
| Tuition (auditors pay same fees as other students): | |
| Regular students (carrying over 5 units) | $6.50 |
| Limited students (carrying 5 units or less) per unit | 2.50 |
| Materials and service: | |
| Regular students | 4.50 |
| Limited students per unit | .50 |
| Student activity fees (not a State Fee): | |
| Regular students | 10.00 |
| Limited students | 3.50 |
| Associated Students Group Accident Insurance | 2.50 |

### Miscellaneous Fees and Deposits

(Fees payable when service is rendered)

| | |
|---|---|
| Change of program | $0.50 |
| College Bulletin | .35 |
| Duplicate library card | .25 |
| Duplicate registration book | .50 |
| Evaluation of transfer records for advanced standing | 2.00 |
| Late filing of registration book | 1.00 |
| Late registration | 1.00 |
| Transcript of record (1st copy free) | 1.00 |
| (Deposits payable before laboratory work is started) | |
| Chemistry | 5.00 |

### Graduation Fees

| | |
|---|---|
| State teaching credentials (each credential) | $3.00 |
| Diploma | 1.00 |

The credential fee is collected through the college by cashier's check or post office money order made payable to the State Department of Education.

# GENERAL REGULATIONS

## INFORMATION

All inquiries relative to the college should be directed to the Registrar's Office.

## NUMBERING OF COURSES

Courses numbered 1 through 99 are in the lower division; those numbered 100 through 199 are in the upper division; and those numbered 200 or over are in the graduate division. Courses numbered 300 or over are professional education courses on the graduate level.

## SCHOLARSHIP, GRADES, AND GRADE POINTS

The following grades are used in reporting the standing of students at the end of each semester: A, excellent; B, good; C, fair; D, passed; F, failed; I, incomplete; E, conditioned (may be made up to grade of D); Cr, credit (without grade); WP, withdrawal passing; and WF, withdrawal failing.

Grades of I or E must be made up by the end of the next semester; otherwise the grade of F will be recorded.

Grade points are assigned as follows: Grade A, 3 points per unit; B, 2 points per unit; C, 1 point per unit; D, no points; F or WF, minus 1 point per unit. Grades of I, Cr, or WP are disregarded in computing grade points. The grade of E is treated as minus 1 point per unit until a final grade is recorded. The number of grade points a student has earned in a subject is determined by multiplying the number of points he has received by the number of units allowed. The grade point average is determined by dividing the grade points earned by the number of units attempted. A student must earn at least a C average in all work undertaken at the college to qualify for a degree or a transcript of record with recommendation to another collegiate institution. Any course may be repeated, but not for additional credit; however, only the second grade earned is considered in the student's average.

### Revision of Grade Point Scale

Beginning in January, 1949, a revision of the present grade point scale will become effective. The change will involve the elimination of the minus grade points assigned to failing grades. Other regulations regarding grade points will also be revised to correspond to the changes in the grade point scale.

## CLASS, UNITS OF WORK, AND STUDY LIST LIMIT

Students who have completed 0 to 29 units of work are classified as freshmen; 30 to 59 units as sophomores; 60 to 89 units as juniors; and 90 or more as seniors.

A unit of credit represents 50 minutes of lecture or recitation combined with two hours of preparation per week through one semester, or three hours of laboratory or field work in the case of laboratory credit.

Students are not ordinarily permitted to enroll for more than 16 units * for credit toward graduation. A normal semester's program is 15 units.

Certain exceptions to this rule exist. If during the preceding semester the student has carried at least 12 units *: (1) If a grade point average of at least 1.5 was earned, 17 units * may be carried for credit toward graduation; and (2) if a grade point average of 2.0 (B) was earned, 18 units * may be carried.

Exceptions to these regulations may be secured only through a petition to the Scholarship Committee.

No student may register for less than 12 units (the minimum full-time load) without the approval of the Dean of General Education or the Dean of Professional Education.

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* In addition to the required one-half unit physical education activity courses.

# PROBATION AND DISQUALIFICATION

## Probation

Any student whose scholarship record shows a cumulative deficit of 12 or more grade points below a C average for all work undertaken in the college will be placed on probation. Probationary status may be continued provided that the student does not increase his grade point deficiency.

## Disqualification

Any student on probation whose scholarship falls below an average grade of C n any single semester is disqualified from further attendance at the college. A scholarship record below a D average for any single semester also disqualifies a student.

A disqualified student may be reinstated after an interval of one semester for reasons satisfactory to the Executive Committee of the Faculty. All applications for reinstatement must be in writing.

Beginning in January, 1949, a revision of the standards for disqualification will be made to correspond with the anticipated grade point revision to become effective at the same time.

# WITHDRAWALS FROM CLASS

Forms for withdrawal from class may be obtained at the Registrar's Office. If a student withdraws from class during the first seven weeks of a semester, a grade of WP will be recorded upon his permanent record for each class which he has dropped. If he withdraws during the remainder of the semester, either an I or a WF will be recorded unless a grade of WP is approved by the proper dean. A grade of I automatically becomes an F unless the work is completed by the end of the next semester of attendance.

# TRANSCRIPTS OF RECORD

Students may secure upon request one transcript of record without fee. Thereafter, a fee of $1 is charged for each transcript secured upon request. Once a student has matriculated in this college, transcripts from other schools will not be returned, or copies of them made. No fees are charged for transcripts required for military purposes.

Transcripts in the possession of students are to be regarded as unofficial records.

# ELIGIBILITY FOR DIRECTED TEACHING

No student shall be eligible for directed teaching (Education 116) leading to the Kindergarten-Primary, General Elementary, General Junior High, and Special Secondary Credentials who has not completed 75 units, been admitted to Teacher Education, and whose entire record, as well as for the preceding semester, does not average at least a 1.2 grade.

No student shall be eligible for directed teaching (Education 316) leading to the General Secondary Credential who has not been admitted to the teacher education program prescribed for admission to candidacy for this credential.

# THE HONORS GROUP

All students who at the end of the sophomore year have attained a grade-point average of 2.5, and such others as have attained a high average in the department in which their major is selected, and who have received the recommendation of that department and the consent of the Committee on Honors, may if they so elect, constitute an honors group, for special treatment in their major subject.

Such students, so far as the facilities of the department and the best interests of he students under its charge allow, shall be treated as befits their individual needs and as their individual capacities warrant. They shall be eligible to enroll in honors or special study courses, although credit in such courses shall be limited to 5 units a emester. They shall not be held to regular attendance in the established courses of their departments if, in the opinion of the instructor, the course requirements can be met hrough special assignments and examinations or by satisfactory performance in the regular examinations in the course. With the consent of the major department, requirements concerning minors and specific courses or sequences in the major may be se aside. Each honor student shall be assigned to a member of his major department fo advice and direction.

Students in the honors group who fail to take advantage of the opportunitie there offered may at the end of any semester be transferred by the department to th general course. Students in the general course who show unusual capacity, upon recommendation of the department and the Committee on Honors, may at the end of an semester, be transferred to the honors group if such transfer appears practicable.

Students who wish to apply for entrance in the Honors Group may do so by fillin out cards to be obtained from their major departments. The applications should b filed with the chairman of the major department not later than a week after registration opens. Units earned by students doing individual study under this plan will b recorded under the symbol 166 and will be subject to the formulated rules dealing wit limitations of student load.

## THE DEGREE WITH HONORS AND WITH DISTINCTION

Upon recommendation of the Committee on Honors, graduation with honors shal be granted to the upper 10 percent of the graduating class. Each department shal determine which students it will recommend for distinction in the major field at graduation, and report its recommendation to the Committee on Honors for transmission t the faculty.

## EXAMINATIONS

No final examinations shall be given to individual students before the regula time. Any student who finds it impossible to take a final examination on the date scheduled must make arrangements with the instructor to have an incomplete grade reporte and must take the deferred final examination not later than the end of the first semeste of attendance following that in which the incomplete was given. No exception shall b made to this rule without the approval of the Dean of General Education or the Dea of Professional Education and the instructor concerned.

## CREDIT FOR EXTENSION COURSES

The amount of credit for extension and correspondence courses acceptable i fulfillment of the requirements for the Bachelor of Arts Degree will depend upon th nature of the courses, the quality of the work done, and the student's preparatio for work in the field of the course. The college ordinarily limits credit to such course as have been approved, and the total of such acceptable credit to 12 units. **Extensio courses are not accepted for graduate credit.**

## CREDIT GRANTED FOR MILITARY SERVICE

Six units of lower division elective credit will be granted to students who hav served in the armed forces of this country upon the completion of the prescribed basi training program before January 1, 1947. Documentary evidence bearing the signature of the proper commanding officer must be filed before credit will be accorded t the student.

Additional units of credit may be granted to students who can document the fac that they have completed officer's or other specialized training, and have been assigne to active military duty before January 1, 1947.

# THE BACHELOR OF ARTS DEGREE

## GENERAL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN TEACHER EDUCATION AND IN LIBERAL ARTS

### TYPES OF CURRICULA

San Diego State College offers two types of curricula leading to the A.B. Degree:
(1) The curricula leading to the California teaching credentials,
(2) The liberal arts curricula.

### GRADUATION REQUIREMENTS

(a) A minimum of 120 semester units of college work representing a four-year ourse is required for graduation.

(b) Twenty-four units of work, ordinarily taken in the senior year, must be arned at this college.

(c) At least a C average in scholarship must be maintained in all work applied oward the degree, in the major field, and in all work taken at this college.

(d) At least 40 units must be completed in the upper division, 30 of which must e earned after all lower division requirements have been satisfied.

(e) Student must comply with the State requirements in United States Constiution, American history, institutions, and ideals.

(f) All major, minor, and specific curriculum requirements must be met.

## LOWER DIVISION REQUIREMENTS FOR ALL CURRICULA

| | *Units* |
|---|---|
| hysical Education | 2 |
| ealth Education 21 | 2 |
| nglish | 6 |
| sychology | 3 |
| oreign Language (not required in commerce, general engineering, or in teacher education in the elementary, junior high and special secondary curricula) | 10 |
| athematics A and B, 6 units, or high school algebra and geometry | 0-6 |
| ocial Sciences | 12 |
| atural Sciences | 12 |
| lectives to make total of 60 units, including lower division preparation for the major and minor. | |

### EXPLANATION OF LOWER DIVISION REQUIREMENTS

**nglish**

The English requirement should be satisfied in either the freshman or sophomore ear. Unless departmental regulations specify other courses, the student should satisfy his requirement by taking English 1 and either English 2 or any optional course pproved by the English Department. English majors are not required to take English 2. The prerequisite for English 1 is a passing mark in the English A qualifying xamination or completion of the course in English A. Credit in English A may be used oward graduation but not in satisfaction of the 6-unit lower division requirement in nglish.

**sychology**

The requirement in psychology should ordinarily be satisfied in the freshman ear by completion of Psychology 1.

**oreign Languages**

At least 10 units in one foreign language are required in the lower division except hat no language is required in commerce, general engineering, or in teacher education in the elementary, junior high, and special secondary curricula. No degree credit i given for only the beginning college semester of a foreign language (except Spanish 70)

*Reduction of unit requirement.* High school work completed with grade of or better for the final semester of a year course in foreign language may meet th foreign language requirement in part. Each year course completed in high school i any foreign language is counted in satisfaction of 3 units of this requirement. A tota of 9 units so credited will satisfy in whole the foreign language requirement. If tw or more years have elapsed since the completion of a high school course in any foreig language, the final year of the high school course may be repeated for college credit Foreign language courses for which a D grade was received in the final semester o a year course in high school may also be repeated for college credit. The student shoul register in a college foreign language course for credit as follows:

| *Year courses completed in high school* | *If completed with grade of C or better student should register as follows:* | *After lapse of 2 years or D grade, student may register as follows:* |
|---|---|---|
| 1 year | Course A for 2 units | Course A for 5 units |
| 2 years | Course B for 4 units | Course A for 2 units |
| 3 years | Course C for 3 units | Course B for 4 units |
| 4 years | Course D for 3 units | Course C for 3 units |

### Social Sciences

Twelve units chosen from two or more of the following fields in social scienc are required: anthropology, economics, geography (except 1, 3 and 4), history, politi cal science, social science, and sociology. Eight of the 12 units must be in th lower division. (Note: Courses in commerce, home arts, library science, philosophy, o psychology may not be used in satisfaction of this 12 unit social science requirement.)

*Reduction of unit requirement.* Two high school semester courses in the field of history, political science, sociology, and economics taken in the senior year wit grades of B or better may be used to reduce the 12 unit social science requiremen to 9 units.

### Natural Sciences

Twelve units, at least 8 of which are in the lower division, selected from course representing each of the following groups, are required:

*(a) Life sciences.* Courses must be selected from one of the following fields bacteriology, biology, botany, physiology, or zoology. This requirement may be satis fied by completion of a year course in high school or by a semester course in colleg (recommended: Biology 1). If laboratory credit is desired, select from life scienc courses listed in section (c) below.

*(b) Physical sciences.* Courses must be selected from the following fields astronomy, chemistry, Geography 1 or 3 (but not both), geology, physical science or physics. A semester course in college in any one of these subjects will satisfy thi requirement. This requirement may also be satisfied by completion of a year cours in high school chemistry or physics. (Students who expect to satisfy this requiremen by a physical science course in college should register for the following: those wh have not completed a year course in high school in either physics or astronomy, shoul take Physical Science 1A; those who have not completed a year course in high schoo in either chemistry or geology should take Physical Science 1B.) If laboratory credi is desired, select from physical science courses listed in section (c) below.

*(c) Laboratory course in natural sciences.* This requirement may be satisfie by completion of a year course in high school with grade of C or better for the fina semester of the junior or senior year in one of the following fields: botany, chemistry physics, or zoology. The laboratory requirement may be satisfied by one of the following college courses:

| *Life Sciences* | *Physical Sciences* |
|---|---|
| Bacteriology 1 | Chemistry 1A or 1B |
| Biology 10A and 10B | Chemistry 2A and 2B |
| Botany 2A or 2B | Geology 1A and 1B |
| Physiology 1C | Physics 1A and 1B or 1C and 1D |
| Zoology 1A or 1B | Physics 2A, 2B, 3A, and 3B |
| | Astronomy 1 and 9 and 10 |

*Reduction of unit requirements.* The 12 unit natural science requirement may reduced to 9 units by completion of a high school year course in biology, botany, emistry, physics, physiology, or zoology taken in the senior year with grade of B better for the final semester.

### athematics

Mathematics A (elementary algebra) and Mathematics B (plane geometry) e required. This requirement may be satisfied by completion of a year course in gh school in algebra and a year course in plane geometry with grade of C or better r the final semester of each course. College credit will be granted for completion of athematics A or B unless the corresponding high school course was completed with ade of C or better in which case the repeated course will be classified as a "refresher" urse carrying no college credit. Students having one semester high school credit in igonometry, intermediate algebra or solid geometry may repeat the corresponding urse in college for 1½ units of college credit.

### ower Division Preparation for the Major

See description of requirements for teaching majors on page 23. Specific requireents for the majors in the liberal arts curricula are listed in connection with the scriptive list of courses in each major field (see pages 71 to 167).

### ower Division Preparation for the Minor

See description of requirements for liberal arts minors on page 20 and for teachg minors on page 23.

# UPPER DIVISION REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN LIBERAL ARTS

## MAJORS IN LIBERAL ARTS

The liberal arts curricula lead to the Bachelor of Arts Degree with majors i **art, chemistry, commerce, economics, English, French, general engineering, geography, history, life science, mathematics, music, physics, political science, psychology, sociology, Spanish, speech arts, and zoology** and qualify for graduate wor in these fields in recognized American colleges and universities. Completion of th requirements of these curricula also enables the graduate to satisfy undergraduat requirements for the general secondary credential which, with graduate work, wil enable the holder to teach in a senior high school or junior college.

## MINORS IN LIBERAL ARTS

Minors must be established in one of the following fields: **anthropology, ar botany, chemistry, commerce, comparative literature, economics, education, English, French, geography, geology, health education, history, journalism, lif science, mathematics, music, philosophy, physical education, physics, politica science, psychology, recreation, sociology, Spanish, speech arts, and zoology.**

## UPPER DIVISION REQUIREMENTS

### Preparation for Upper Division

Students must complete the lower division requirements for all curricula. I addition, lower division requirements for the major and minor must be completed. Refe to the section of this bulletin on Courses, pages 71 to 167, and to the outlines of curricula, pages 51 to 70, for further information.

### Minimum Units and Credit Limitations

Major and minor work are required as follows:

| | *Units* |
|---|---|
| Minor (minimum in upper division courses) | 9 |
| Major (upper division courses) | 24 |

At least 40 units in upper division courses must be completed, 30 of which mus be earned after all lower division requirements have been satisfied. If a student i approaching upper division standing, he may carry sufficient lower division units t complete the required minimum of 60 units and carry upper division units for th remainder of his study load. Students with sophomore standing may carry upper division courses for upper division credit provided that they have the written approval o the chairman of the department and the Dean of General Education or Dean of Professional Education.

## MAJORS AND MINORS

### Majors

The specific requirements for each major are listed at the beginning of eac departmental division among the description of courses. (See pages 71 to 167.) Th student is advised to choose his major as early in his college course as practicable s that he may be able to plan his work according to the major requirements. Failure t meet the lower division requirements of the major department before the junior yea may make it impossible to satisfy the upper division requirements within the norma period of two years. In addition to departmental majors, the following majors are als offered:

**The General Major:** The general major of 36 upper division units must be chose from three fields with not more than 15 units nor fewer than 6 to 9 units from any on field. A minimum of a year course in each field must be completed in the lower divisio as foundation for upper division work in the general major. A minor is not required however, 4 additional upper division elective units must be completed to meet the minimum requirement of 40 upper division units for graduation.

The general major is planned for students who are preparing for home arts, law journalism, library work, social work, theology, recreation, or for any other vocatio requiring a background of general training. The program of the student should be planned in consultation with the Dean of General Education and approved, revised, or rejected by the chairmen of the departments represented in the major.

**Life Science Major:** Lower division requirements: Zoology 1A-1B or Biology 10A-10B; Zoology 20; Botany 2A-2B; Chemistry 1A-1B or 2A-2B; Physics 2A-2B-3A-3B. Recommended: Geology 1A, Astronomy 1. Upper division requirements: A minimum of 24 upper division units in zoology and botany of which 6 units may be from a related field. The plan for this major must be with the approval of the Chairman of the Division of Life Sciences.

### Minors

A minor consists of at least 15 units of work completed in one of the above fields of study. At least nine of these units must be earned in upper division courses. The entire requirement for a minor may be met with upper division courses provided these courses have no lower division prerequisites. Prerequisites for each course are listed among the course descriptions on pages 71 to 167.

In addition to the departmental minors listed above, the following minors are offered:

**Minor in Life Science:** Lower division requirements: Biology 10A-10B or equivalent; Zoology 20; Chemistry 2A-2B or 1A. Recommended: Astronomy, geology, physics. Upper division requirements: At least 9 upper division units in zoology and botany to be selected with the approval of the Chairman of the Division of Life Sciences.

**Minor in Recreation:** Students must show credit for 4 semesters of physical education activity courses and in addition a minimum of 6 lower division units to include Physical Education 51, 53, and electives chosen from Art 61B or fields of dance, drama, or music. Upper division courses must include a minimum of 9 units, including Physical Education 165, 170, and 199. Consultation with the Chairman of the Division of Health, Physical Education, and Recreation is advised.

## EXAMINATION REQUIREMENTS IN THE UNITED STATES CONSTITUTION AND AMERICAN HISTORY, INSTITUTIONS, AND IDEALS

Each student of a state college to qualify for graduation shall demonstrate competence in the United States Constitution and American history, institutions and ideals, by passing satisfactorily a comprehensive examination on these fields prepared and administered by the college. Students transferring from other institutions of collegiate grade who have already met this requirement may have this examination waived, except that candidates for a teaching credential must meet the United States Constitution requirement by examination or by completion of a course covering the Constitution in a California institution of collegiate grade. The examination ordinarily should be taken in the junior year.

This graduation requirement may be fulfilled by any one of the following alternatives:

1. Passing satisfactorily comprehensive examinations in both United States Constitution and American history, institutions and ideals.
2. Completion of History 17A and 17B, or History 171A and 171B, or History 172A and 172B, or Political Science 139A and 139B.
3. Completion of Political Science 71A and 71B, or Political Science 101, plus satisfactory completion of an examination in American history, institutions and ideals.
4. Completion of History 8A and 8B, or History 173A and 173B, or History 179A and 179B, plus satisfactory completion of an examination on the United States Constitution or the substitutes for that examination enumerated in item 3.
5. Completion of comparable courses in other institutions of collegiate grade, except that candidates for the A.B. Degree and a teaching credential must have completed the course covering the United States Constitution in a California institution of collegiate grade.

## PROFESSIONAL, PREPROFESSIONAL, AND VOCATIONAL CURRICULA

For description of professional curricula in education, see pages 27 to 50; for pre-professional and vocational curricula, see pages 51 to 70.

# UPPER DIVISION REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN TEACHER EDUCATION

## TEACHING CREDENTIALS

San Diego State College is authorized by the State of California to recommen students for the teaching credentials listed below. To be recommended, students mus complete, or have completed, the A.B. Degree in one of the curricula offered for teachers

| *The credential* | *Subjects and grades for which it is valid* |
|---|---|
| General Elementary | All grades through the eighth. |
| Kindergarten-Primary | Kindergarten through third. |
| General Junior High (Must be taken with another credential) | All subjects in grades seven, eight and nine in al elementary or secondary schools. |
| General Secondary | All subjects in the public schools in grade 7 and above |
| Special Secondary in Art | Art in all grades of the public schools. |
| Special Secondary in Business Education | Business education subjects in all grades of the publi schools. |
| Special Secondary in Music | Music in all grades of the public schools. |
| Special Secondary in Physical Education | Physical education in all grades of the public schools |
| Special Secondary in Speech Arts | Speech in all grades of the public schools. |
| Special Secondary in Correction of Speech Defects | Correction of speech defects in all grades of the publi schools. |
| Administration in Elementary Education | Authorizes for certificate to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in elementary schools. |
| Supervision in Elementary Education | Authorizes for certificate to supervise instruction in elementary schools. |
| Special Subject Supervision | Supervision of the special subject in all grades. |

## COMBINATION OF CREDENTIALS

Students who seek more than one teaching credential must complete in full the curriculum for each, with only such exceptions as are indicated in the statement of requirements. For each credential in addition to one, at least 12 additional units must be earned. These 12 units may be taken in nonprofessional courses if all basic curriculum requirements have been satisfied.

A combination of the elementary school credential and the junior high school credential may be secured by completing the requirements for the elementary school credential and the following additional requirements:

(a) A teaching major.
(b) Education 100B in the major field.
(c) Three units of directed teaching, or equivalent, in a junior high school.
(d) Education 115B.
(e) A minimum total of 132 units.

A combination of the junior high school credential and a special secondary credential may be secured by completing the requirements for the special secondary credential and the following additional requirements:

(a) A junior high school teaching major.
(b) Education 100B in the junior high school teaching major.
(c) Three units of student teaching in the junior high school teaching major.
(d) A minimum of 132 units.

A candidate for either the general elementary credential or the kindergarten-rimary credential may secure the other credential subsequently or concurrently by taking 12 additional units. Four of these units shall be in directed teaching (Educaion 116) at the new level and the remainder as prescribed by the Director of Elementary Education.

## EXAMINATION REQUIREMENTS IN THE UNITED STATES CONSTITUTION, AMERICAN HISTORY, INSTITUTIONS, AND IDEALS

For explanation of these requirements, see page 21.

## UPPER DIVISION REQUIREMENTS

### Preparation for Upper Division

Students in teacher education curricula must complete the lower division requirements for all curricula as indicated on page 17. Additional pattern requirements are utlined under each specific curriculum on the following pages.

### Minimum Units and Credit Limitations

A minimum of 40 units in upper division courses must be completed, 30 units of which must be earned after all lower division requirements have been satisfied. If a tudent is approaching upper division standing, he may carry sufficient lower division nits to complete the required minimum of 60 units and carry upper division units for he remainder of his study load. Students with sophomore standing may carry upper ivision courses for upper division credit provided that they have the written approval f the chairman of the department and the Dean of Professional Education.

A maximum of 40 units of credit in any one subject matter field or in education ourses may be applied toward the requirements of the A.B. Degree.

### Preparation for Graduate Work

Students who take the A.B. Degree with a special credential and who contemlate doing graduate work for a master's degree in an academic field or for the general secondary credential, will find it advantageous to use their electives to provide a founation for that work.

## MAJORS AND MINORS

All teaching curricula require one major and one minor.

### Major and Minor for the Elementary Credential

**Education** shall be the major for the kindergarten-primary and general elementary chool credentials. Its requirements are outlined under those curricula. It is recommended that the minor for these credentials be chosen from the academic fields of **English, foreign languages, mathematics, science or social science.** The minor in ocial science must include 6 upper division units in history or in geography and 3 units elected from anthropology, economics, geography, history, political science, or sociology. A second minor, though not required, may be chosen from one of these fields or from art, music, physical education or speech arts. Students taking an elementary creential in combination with a special secondary credential may use the special major or their minor in elementary education.

### Teaching Major for Junior High School and Special Secondary School Credentials

A teaching major for the junior high school credential consists of a minimum of 4 units of which a minimum of 18 units must be in the upper division. An average f C in scholarship is required in all upper division courses in the field of the teaching major. Teaching majors may be established in the following fields: **English, foreign languages, general science, mathematics, and social science.** A teaching major in he special secondary credential curricula of art, business education, music, physical ducation, and speech arts ranges from 24 to 40 units, depending upon the curriculum. Refer to the following pages for outlines of requirements for these credentials.

*A Teaching Major in English* shall include English 1; 6A; 56A-56B or 60A-60B; nd 18 units of upper division work. This credit must include 3 units in American literature and 3 units in Shakespeare. Recommended: English 192.

*A Teaching Major in General Science* shall include a minimum of 24 units, not less than 18 of which are upper division, including a college year course in a biological science, a year course in high school or college physics and a concentration of 12 units, at least 6 of which are upper division, in one major subject (botany, chemistry, physics, zoology). See definition of teaching majors.

*A Teaching Major in Social Science* shall include a minimum of 24 units not less than 18 of which are upper division. There shall be a concentration of 12 units, at least 6 of which are upper division, in one major subject (anthropology, economics, geography, history, political science, sociology). A year course in American History must be included. See definition for teaching majors for the junior high school credential.

### Teaching Minor for Junior High and Special Secondary Credentials

A teaching minor consists of 15 units in a given field, of which 9 or more must be in upper division courses. Teaching minors may be established in the following fields: **art, business education, English, foreign languages, general science, health education, mathematics, music, social science, physical education, recreation, and speech arts.** (See requirement above for elementary school credentials.)

*A Teaching Minor in English:* Candidates for the teaching minor in English must include English 1; 6A; and 9 elective units in upper division English. This credit must include 3 units in American Literature, taken either in lower division or in upper division. Credit in journalism and speech arts may not be used to fulfill the requirements for the English minor.

*A Teaching Minor in Health Education* shall include: Physical Education 51, Home Arts 61A, and Health Education 65 in the lower division; Health Education 152, 153, Physical Education 199 or equivalent in the upper division. For physical education majors, Health Education is allowed only as a second minor area.

*A Teaching Minor in Music:* Candidates for the teaching minor in music are required to take music aptitude tests at the time the minor is chosen and to enroll in at least one music activity each semester. In special cases this requirement may be waived by permission of the faculty of the Music Department.

Applicants for music minors must maintain a grade average of C in all music courses. All students must show credit for Music 1A or clear this requirement by examination. Music 7A is required of all candidates for the elementary credential. In the lower division, with the proper regard for course sequences, 6 units may be chosen from the following courses: Music, 1A-1B-1C-1D, 2A, 3A, 4A-4B, 6A, 8A-8B, 16, 17, 18, Aesthetics 1A-1B. Nine units of upper division music are required, not more than two of which may be selected for credit from the activity courses (Treble Clef, orchestra, etc.).

*A Teaching Minor in Physical Education:* Men must show credit for: four semesters of physical education activity courses, Physical Education 51, 53 and 72 in the lower division; Education 100B-PE, Physical Education 154, 170 and at least two units in an upper division Professional Activity course approved by the department.

Women must show credit for: four semesters of physical education activity courses, Physical Education 53, and 3½ units of electives in the lower division; nine units chosen from Physical Education 153, 156A-156B, 161, 164 and 170 in the upper division.

*A Teaching Minor in Recreation:* A teaching minor in recreation shall include 4 semesters of physical education activity courses and in addition Physical Education 51, 53, 165, 170 and electives selected from Art 61B or from the fields of dance, drama, or music. The upper division must include Physical Education 199, Special Study in Physical Education or Recreation, to meet the individual needs of the student; to be planned in consultation with the Chairman of the Division of Health, Physical Education, and Recreation. Physical Education majors may use this as a second minor only.

*A Teaching Minor in Social Science:* A teaching minor in social science must include the general education lower division requirement and in addition a minimum of 9 units of upper division social science courses, selected from anthropology, economics, geography, history, political science, or sociology, 6 units of which must consist of a year course sequence. A year course in American History must be completed in either the lower or upper division.

### Teaching Majors for General Secondary Credential

Teaching majors may be established in the following fields: **art, business edu- ation, chemistry, economics, English, history, life science, music, physical science, hysics, social science, and speech arts.** In most fields, 12 semester units are required n the lower division and 24 semester units in the upper division. Some departments ermit 6 units of these 24 upper division units to be selected from related fields with he approval of the departmental representative. In addition to these undergraduate equirements, 2 to 5 semester units of graduate work are required in the major field uring the postgraduate year. Refer to pages 39 to 48 for the programs for each epartment. Candidates for the General Secondary credential should consult with the irector of Secondary Education. Refer to page 39 for requirements for admission to andidacy for the General Secondary credential.

### Teaching Minors for the General Secondary Credential

Teaching minors may be established in the following fields: **art, business edu- ation, chemistry, economics, English, French, health education, history, life cience, mathematics, music, physical education for men, physical education for omen, physics, recreation, Spanish, and speech arts.** In most fields, 6 semester nits are required in the lower division and 9 semester units in the upper division for he A.B. Degree. This credential requires enough additional units to make a minimum f 21 semester units to be completed by the date of recommendation for the credential. efer to pages 39 to 48 for the programs for each department.

## ADMISSION TO TEACHER EDUCATION

Students who expect to become teachers should apply for admission to teacher ucation during the first semester of the sophomore year. Students entering the college t the end of the sophomore year will apply at the beginning of the junior year. No urses in education may be taken until admission is granted; any exception to this le must have the approval of the Dean of Professional Education. *Admission to the llege* does not guarantee that the student will be admitted to teacher education. The llowing requirements must be met for admission to teacher education curricula:

1. A satisfactory score on a college aptitude test taken at the college.
2. Evidence of competence in the use of the English language and of satisfactory ability in arithmetic, handwriting, reading, and spelling indicated by having passed the Fundamentals Test. (See college calendar for dates of test which should be taken in the *freshman year.)*
3. Assurance of correct speech habits and voice control by having satisfactorily completed a course in corrective speech or by having passed a speech test given by the college.
4. Assurance of physical fitness.
5. If the student is to be a candidate for the general secondary credential or one of the special secondary credentials, he must furnish a recommendation from the chairman of that department stating that the student has ability and shows promise of teaching success in his field and that the department looks with favor upon his application.
6. The completion of the first two years or more of a given curriculum, or its equivalent, and of subsequent work with a grade point average of 1.2 or better for all credentials except the general junior high school or the general secondary, for which shall be required a grade point average of 1.5 or better in all work and 1.75 in the major field.
7. If the student is a candidate for any credential on the secondary school level (general junior high school, special secondary, or general secondary), he must have a satisfactory score on a General Culture Test.
8. If the student is a candidate for the General Secondary credential he must have a tentative program approved by the authorized departmental representative of his major field, minor field, and the education department.
9. All applicants need to be approved by an interviewing committee of the college faculty. In its evaluation the committee will consider the following factors established by the State Board of Education: intelligence, scholarship, professional aptitude, personality and character, speech and language usage, and many-sided interests.

### Transfer Students

Students who have completed two or more semesters of work in another college, upon transferring to San Diego State College, should make application for admission to teacher education as soon as they enroll in the college. Transfer students should take the necessary tests for admission to teacher education given during the orientation period. (See college calendar for dates.)

### Transfer Students With Emergency Credentials in Elementary Education

Certain adaptations in the education courses have been made to meet the needs o experienced teachers who hold an emergency credential in elementary education. See the Director of Elementary Education for details.

### Advanced Standing in Teacher Education

A minimum of 6 units in education courses is required for graduation from thi college. The college also requires satisfactory evidence of successful teaching ability.

After an interval of 5 years, courses in education are reevaluated and subject t deduction in credit, in light of such new requirements as may have been put int effect and changes in educational procedures. Students formerly in attendance wil not be considered to be working in the curriculum until an evaluation and statemen of credit has been secured from the Registrar's office. All courses taken either at thi college or elsewhere must be approved by an official adviser in order to be credite toward meeting degree requirements.

### Admission to Graduate Courses (200-299)

For requirements for admission to 200-299 courses, see page 12.

# PROFESSIONAL CURRICULA IN EDUCATION

Professional curricula in education, requiring from four to five years to complete, lead to the teaching credentials.

All candidates in teacher education curricula should observe carefully the requirements for admission to teacher education and be prepared to meet them at the end of the sophomore year. Students in other colleges who contemplate transferring to San Diego State College should arrange their programs so as to meet the requirements of their particular curriculum as early as possible. See college calendar for dates when the Fundamentals Test will be given. See page 25 in this bulletin for requirements for admission to teacher education.

## CURRICULA LEADING TO THE GENERAL ELEMENTARY, KINDERGARTEN-PRIMARY, OR GENERAL JUNIOR HIGH SCHOOL CREDENTIAL

### A.B. DEGREE WITH GENERAL ELEMENTARY OR KINDERGARTEN-PRIMARY CREDENTIAL

One teaching minor is required. See page 23 for statement.

### Freshman Year

| | *Units for General Elem.* | *Units for Kdg.-Primary* |
|---|---|---|
| *First Semester* | | |
| Art 6A, Design | 2 | 2 |
| English 1, Freshman Composition | 3 | 3 |
| Health Education 21, Principles of Healthful Living | 2 | 2 |
| Physical Education (activity course) | ½ | ½ |
| Physical Science 1A, Introduction (If year-course in high school physics completed, substitute another science) | 3 | 3 |
| Electives (Advisable to start social science or other lower division requirements; also minor. See page 17) | 6 | 6 |
| *Second Semester* | | |
| Art 6B, Design | 2 | 2 |
| English 2, Freshman Literature or optional course | 3 | 3 |
| Physical Education (activity course) | ½ | ½ |
| Physical Science 1B, Introduction (If year-course in high school chemistry completed, substitute another science) | 3 | 3 |
| Psychology 1, General | 3 | 3 |
| Electives (Continue social science, other lower division requirements, or minor) | 3–5 | 3–5 |
| | 31–33 | |

## Sophomore Year

| | Units for General Elem. | Units for Kdg.-Primary |
|---|---|---|
| *First Semester* | | |
| Art 61A, Crafts in the Elementary Schools | 2 | 2 |
| Biology 1, Survey of Biology (If no previous science laboratory, take Biology 10A-10B or Botany 2A. Not required if year-course in high school biology, botany, physiology, or zoology completed. See page 18) | 3 | 3 |
| Geography 1, Elements (natural science credit) | 3 | 3 |
| Music 1A, Musicianship—Fundamentals of Music | 3 | 3 |
| Music 28A, Piano (or equivalent by examination, but without credit. May be taken in the junior year) | – | 1 |
| Physical Education (activity course) | ½ | ½ |
| Electives (social science, natural science, or minor) (Prepare for the graduation requirement in U. S. Constitution, American history, institutions, and ideals. See page 21.) | 3 | 3 |
| *Second Semester* | | |
| Geography 2, Regions (social science credit) | 3 | 3 |
| Music 7A, Music Materials for the Elementary School | 3 | 3 |
| Music 28B, Piano (or the equivalent by examination) | – | 1 |
| Physical Education 53, Physical Education in the Elementary School | 2½ | 2½ |
| Spanish 70, Spanish for Elementary School Teachers (Not required but recommended if no high school Spanish) | 5 | – |
| Speech Arts 2A, Fundamentals | – | 3 |
| Electives (Complete lower division requirements and continue minor) | 1–4 | 1–4 |
| | 29–32 | |

## Junior Year

Students transferring from another curriculum in lower division or from anothe college or junior college may interchange this semester with semester II of the senio year. (Forty units of upper division work are needed.) The Education Departmen will probably find it necessary to ask some students who have met all requirements t defer entering practicum until the second semester of the junior year in order to equat class size. Those who defer entering the practicum should use this semester to

1. Complete lower division requirements in art, music, Physical Education 53 natural science, social science and others as needed.
2. Complete minor requirements.
3. Meet requirement for American History and U. S. Constitution.
4. Elect Education 102A or 102B if needed to complete program.

| | | | |
|---|---|---|---|
| *First Semester* | | | |
| Education 102A, Measurement and Evaluation in Elementary Education or Education 102B, Child Growth and Development | | 3 | 3 |
| Health Education 151, Health Education for Teachers (taken with practicum) | | 2 | 2 |
| Education 147, Education Practicum—Primary Level | | 10 | 10 |
| Methods in Primary Reading | 2 | | |
| Elementary School Methods, including Children's Literature | 2 | | |
| Elementary Music Education | 1 | | |
| Elementary Art Education | 1 | | |
| Mental Hygiene and Speech | 2 | | |
| Directed Teaching | 2 | | |

Proficiency in use of audio-visual equipment is required by examination. Specific instruction in audio-visual materials is given in each subject matter method course.

| | | Units for General Elem. | Units for Kdg.-Primary |
|---|---|---|---|
| *Second Semester* | | | |
| Education 102A, Measurement and Evaluation in Elementary Education, or 102B, Child Growth and Development | | 3 | 3 |
| Education 148, Education Practicum—Intermediate Level | | 12 | 8 |
| Elementary Arithmetic Education | 2 | | |
| Elementary Social Studies and Science Ed. | 2 | | |
| Elementary Art Education | 1 | | |
| Elementary Music Education | 1 | | |
| Educational Psychology (learning process, including theory of audio-visual education) | 2 | | |
| Additional 4 units for General Elementary, but not Kindergarten-Primary | | | |
| Language Arts | 2 | | |
| Directed Teaching | 2 | | |
| Education 116, Student Teaching, primary grades | | - | 3 |

## Senior Year

| | Units for General Elem. | Units for Kdg.-Primary |
|---|---|---|
| *irst Semester* | | |
| Education 116, Directed Teaching | 7 | 4 |
| Education 146, Kindergarten-Primary Practicum (follows Education 148) | - | 4 |
| Education 115A, History and Philosophy of Education (or in second semester) | 2 | 2 |
| Elective | 3 | 3 |
| *econd Semester* (and summer session if needed) | | |
| Elective to complete one minor and to equal total for degree | 16–18 | 16–18 |
| Total | 120 units | |

## Summary

| | Units for General Elem. | Units for Kdg.-Primary |
|---|---|---|
| rt 6A-6B, 61A | 6 | 6 |
| duc. 102A, 102B, 115A, 116, 146, 147, 148 | 37 | 37 |
| nglish | 6 | 6 |
| peech Arts | - | 3 |
| ealth Education 21, 151 | 4 | 4 |
| hysical Education Activities and P.E. 53 | 4 | 4 |
| usic 1A, 7A, 28A-B | 6 | 8 |
| atural Sciences (including Geog. 1) | 12 | 12 |
| sychology 1 | 3 | 3 |
| ocial Science (including Geog. 2) | 12 | 12 |
| lectives (including minor) | 30 | 25 |
| Total | 120 | 120 |

## A.B. DEGREE WITH GENERAL JUNIOR HIGH SCHOOL CREDENTIAL

Refer to page 23 for statements concerning teaching majors and minors. Students who expect to secure the General Secondary Credential should refer to pages 39 to 48, and use their elective units to work toward such programs outlined. Students who expect to secure the Master of Arts Degree should refer to page 17 and use their elective units to work toward a liberal arts major or minor. See statements on page 22 regarding combinations of this with other credentials. This credential may be earned only in conjunction with a second credential.

### Freshman Year

| | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| Biology 1, Survey of Biology (see page 18) | 3 | – |
| English 1, Freshmen Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Geography 1, Elements (natural science credit) and 2, Regions (social science credit) | 3 | 3 |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Physical Science 1A or 1B, Introduction (see page 18) | – | 3 |
| Physical Education (activity courses) | ½ | ½ |
| Electives to meet lower division requirements (see page 17) | 3 | 5 |
| | 14½ | 14½ |

### Sophomore Year

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Psychology 1, General | 3 | – |
| Physical Education (activity courses) | ½ | ½ |
| Speech 2A, Fundamentals of Public Speaking (recommended) | – | 3 |
| Electives (to include preparation for major and minor and completion of lower division requirements) | 12 | 12 |
| | 15½ | 15½ |

### Junior Year

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Education 115B, Secondary Education | 3 | – |
| Education 102C, Growth and Development of the Adolescent | 3 | – |
| Education 102D, Measurement and Evaluation in Secondary Education | – | 2 |
| Education 130, Educational Psychology | – | 2 |
| Health Education 151, Health Education for Teachers (may be taken either semester) | 2 | – |
| Electives, including major and minor | 7 | 11 |
| | 15 | 15 |

### Senior Year

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Education 100B, Methods (in major and minor subjects) | 3 | – |
| Education 115A, History and Philosophy of Education | – | 2 |
| Education 116, Directed Teaching | 3 | 3 |
| Electives, including major and minor | 9 | 10 |
| | 15 | 15 |

### Summary

| | *Total* |
|---|---|
| Education 100B, 102C, 102D, 115A, 115B, 116, 130 | 21 |
| English | 6 |
| Health Education 21, 151 | 4 |
| Natural Sciences | 12 |
| Social Sciences | 12 |
| Psychology 1 | 3 |
| Speech Arts 2A | 3 |
| Physical Education | 2 |
| Electives, including teaching major and minor | 57 |
| | 120 |

# CURRICULA LEADING TO THE SPECIAL SECONDARY CREDENTIALS

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN ART

This course leads to the A.B. Degree and to the Special Secondary Credential in Art which entitles the holder to teach art in senior high junior high, and elementary schools.

### Lower Division

| | *Units* |
|---|---|
| Aesthetics 5, Art Orientation, or 51, Survey of Mexican Art | 2 |
| Aesthetics 50, History and Appreciation of Art | 2 |
| Art A-B, Drawing and Composition | 2–4 |
| Art 6A-6B, Design | 4 |
| Art 14A, Lettering | 2 |
| Art 61A, Crafts in Elementary Schools | 2 |
| Art 61B, Crafts | 2 |
| Electives in Art | 6–8 |
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 6 |
| Health Education 21, Principles of Healthful Living | 2 |
| Natural Sciences (see page 18) | 9–12 |
| Physical Education (activity courses) | 2 |
| Psychology 1, General | 3 |
| Social Sciences (see page 18) | 9–12 |
| Electives, including courses for minor | 7–10 |
| | 60 |

### Upper Division

| | |
|---|---|
| esthetics 150, Appreciation and History of Art | 2 |
| rt 106A, Printmaking | 2 |
| rt 112A, Design and Composition | 2 |
| rt 116A, Advanced Painting | 2 |
| rt 119A, Ceramics | 2 |
| rt 194A, Costume Design | 2 |
| rt 195, Design | 2 |
| lectives in upper division art | 5 |
| peech Arts 140A, Stage Design | 3 |
| ealth Education 151, Health Education for Teachers | 2 |
| ducation 115B, Secondary Education | 3 |
| ducation 102C, Growth and Development of the Adolescent | 3 |
| ducation 119, Art in the Elementary School | 2 |
| ducation 102D, Measurement in Secondary Education | 2 |
| ducation 130, Educational Psychology | 2 |
| ducation 100B-A, Methods in Art and in the minor | 3 |
| ducation 115A, History and Philosophy of Education | 2 |
| ducation 116, Directed Teaching | 6 |
| lectives, including minor | 13 |
| | 60 |

### Summary

| | |
|---|---|
| esthetics 50, 150, and 5 or 51 | 6 |
| rt major | 38 |
| ducation | 23 |
| nglish | 6 |
| ealth Education 21 and 151 | 4 |
| atural Sciences | 12 |
| hysical Education | 2 |
| ychology 1 | 3 |
| cial Sciences | 12 |
| eech Arts 140A | 3 |
| ectives, including minor | 11 |
| | 120 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN BUSINESS EDUCATION

This course leads to the A.B. Degree and to the Special Secondary Credential Business Education, which entitles the holder to teach business subjects in sen high and junior high schools.

In addition to the following academic requirements, satisfactory evidence of o half year, or 1,000 hours of approved experience in the field named in the credent must be submitted.

Four areas of specialization are possible for the student majoring in Busin Education: Accounting, Accounting-Secretarial, Merchandising, and Secretarial.

### ACCOUNTING AND SECRETARIAL SUBFIELDS

#### Lower Division

| | | | *Un* |
|---|---|---|---|
| Economics 1A-1B, Principles | | | |
| Commerce A, Business Mathematics | | | |
| Commerce 1A-1B, Typewriting | | | |
| Commerce 5A-5B, Shorthand (Majors in Accounting and Merchandising should substitute courses approved by the departmental representative) | | | 1 |
| Commerce 16A-16B, Secretarial Accounting | | | |
| General College Requirements | | | 2 |
| English 8, Business English | | 3 | |
| English 2, Freshman Literature | | 3 | |
| Geography 1, Physical Elements | | 3 | |
| Geography 10, Economic | | 3 | |
| Health Education 21, Principles | | 2 | |
| Natural Science (Geography 1 included above) | | 6–9 | |
| Physical Education (activity courses) | | 2 | |
| Psychology 1, General | | 3 | |
| Social Science (Economics 1A-1B and Geography 10 included above) | | 0–3 | |
| Speech Arts 2A, Fundamentals | | 3 | |
| Electives | | | 0– |
| | | | 6 |

#### Upper Division

| | | | |
|---|---|---|---|
| Commerce 18A-18B, Commercial Law | | | |
| Commerce 103A-103B, Office Management | | | |
| Commerce 121, Business Administration | | | |
| Upper Division Accounting (Merchandising and Secretarial majors should substitute courses approved by the departmental representative) | | | |
| Health Education 151, Health Education for Teachers | | | |
| Education Requirements | | | 24 |
| Education 115B, Secondary Education | | 3 | |
| Education 102C, Growth and Development of the Adolescent | | 3 | |
| Education 102D, Measurement and Evaluation in Secondary Education | | 2 | |
| Education 130, Educational Psychology | | 2 | |
| Education 100B-BE, Objectives and Curricula in Business Education and methods in the minor subject | | 3 | |
| Education 100B-T, Methods in Typewriting | | 1 | |
| Methods in one of the following specializations, depending upon subfield major | | 2 | |
| Education 100B-A, Methods in Accounting | 2 | | |
| Education 100B-ME, Methods in Merchandising | 2 | | |
| Education 100B-S, Methods in Shorthand | 2 | | |
| Education 115A, History and Philosophy of Education | | 2 | |
| Education 116, Directed Teaching | | 6 | |
| Minor | | | |
| Electives | | | 4 |
| | | | 6 |

## .B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN MUSIC

Students intending to become applicants for this credential must show evidence musical ability, before entering the course. They must be able to play artistically on the piano, music of the grade of the simpler *Songs Without Words* of Mendelssohn else possess a corresponding degree of proficiency in voice or an orchestral instru- nt. No credit is given to music majors for the basic courses of Music 1A and sic 7A, but if a deficiency exists in the field of general musicianship, the student ll be required to take either or both of these courses without credit.

All music majors are required to enroll in one musical activity each semester. tivities should be included from *both* instrumental and choral groups. In special ses this requirement may be waived by petition to the Music Department. All stu- nts are required to pass examinations in applied music in order to receive dit. No credit is allowed to majors in voice or orchestral instruments for any work piano which is below the level of artistic hymn playing.

Applicants for the Special Secondary Credential in Music must maintain a grade erage of C or better in music courses.

Each senior music major will perform, two months before his graduation, for the sic faculty, his senior recital in its entirety. At this time the faculty will judge the istry of the performance and choose those students who will be granted the privilege a public recital.

This course leads to the A.B. Degree with a Special Secondary Credential in sic which will authorize the holder to teach music in the elementary, junior and nior high schools of the State.

A maximum of 40 units in Music may be used toward the A.B. Degree. Of these units a maximum of 3 may come from the field of musical activities: band, choir, orus, glee clubs and orchestra.

### Lower Division

| | *Units* |
|---|---|
| glish 1, Freshman Composition, and 2, Freshman Literature or optional course | 6 |
| cial Science (see page 18) | 9–12 |
| tural Science (see page 18) | 9–12 |
| ychology 1, General | 3 |
| alth Education 21, Principles of Healthful Living | 2 |
| ysical Education (activity courses) | 2 |
| sic 1A, 1B, 1C and 1D, Musicianship | 6 |
| sic 4A-4B, Elementary Harmony | 6 |
| sic 2A, 3A, 6A, Orchestral Instruments | 3 |
| sic 29 or 17, and 18, Applied | 2–5 |
| sic 11, 12, 13, 15, 20, 26 or 30, Music Activities | 0–3 |
| sthetics 1A-1B, Survey of Music | 4 |
| nor (English, social science or natural science recommended as such minor may be completed in whole or in part by requirements as listed above) | 0–6 |
| | 60 |

### Upper Division

| | *Un* |
|---|---|
| Aesthetics 102A-102B, Music History | 4 |
| Music 105A-105B, Advanced Harmony and Composition | 6 |
| Music 106, Counterpoint | 2 |
| Music 107, Form and Analysis | 2 |
| Music 119A, Instrumental Conducting | 1 |
| Music 120A, Vocal Conducting | 1 |
| Music 121A, Instrumentation | 2 |
| Music 111, 112, 113, 115, 126, or 130, Activities | 3- |
| Music 117 or 118, Applied | 3- |
| Minor | 9 |
| Health Education 151, Health Education for Teachers | 2 |
| Education 115B, Secondary Education | 3 |
| Education 102C, Growth and Development of the Adolescent | 3 |
| Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Education 130, Educational Psychology | 2 |
| Education 117A, Elementary Music Education | 2 |
| Education 145, Organization and Administration of Music Education | 2 |
| Education 100B-MU, Methods in Music and methods in the minor subject | 3 |
| Education 115A, History and Philosophy of Education | 2 |
| Education 116, Directed Teaching | 6 |
| | 60 |

### Summary

| | |
|---|---|
| Health Education 21 and 151 | 4 |
| Aesthetics 1A-1B and 102A-102B | 8 |
| Social Science | 9- |
| Natural Science | 9- |
| English | 6 |
| Psychology | 3 |
| Music 1A, 1B, 1C, 1D, 4A-4B, 2A, 3A, 6A, 29 or 17, 18, 105A-105B, 106, 107, 119A, 120A, 121A, and Music Activities as prescribed by the Department | 40 |
| Education 100B-Mu, 102C, 102D, 115A, 115B, 116, 117A, 130, 145 | 28 |
| Minor | 9- |
| Physical Education | 2 |
| Electives | 2- |
| | 12 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (MEN)

This course leads to the A.B. Degree and to the Special Secondary Credential in ysical Education which entitles the holder to teach physical education in senior high, ior high and elementary schools.

Men majoring in physical education must register for Professional Activities for ch semester of the last three years in order to secure adequate skills, methods of ching and proficiency in officiating. Participation in an intercollegiate sport is ommended.

### Lower Division

| | | *Units* |
|---|---|---|
| glish 1, Freshman Composition, and 2, Freshman Literature or optional course | | 6 |
| eech Arts 2A, Fundamentals | | 3 |
| tural Science (including Zoology 1A, General, or equivalent, Physiology 1A, Human Physiology, Zoology 8, Human Anatomy, and a physical science if needed (see page 18) | | 9–12 |
| ial Science (see page 18) | | 9–12 |
| chology 1, General | | 3 |
| alth Education 21, Principles of Healthful Living | | 2 |
| alth Education 65, Community Health | | 3 |
| ysical Education: | | |
| 43, 44, Professional Activities | 4 | |
| 51, First Aid and Safety Education | 2 | |
| 53, Phys. Educ. in Elementary Schools | 2 | |
| 72, Introduction to Phys. Educ. | 2 | |
| | | 10 |
| ior (English, soc. science or natural science recommended as such minor may be completed in whole or in part by requirements as listed above | | 0–6 |
| ctives | | 0–11 |
| | | 60 |

### Upper Division

| | | |
|---|---|---|
| lth Education 151, Health Education for Teachers | | 2 |
| ication 115B, Secondary Education | | 2 |
| ication 102C, Growth and Development of the Adolescent | | 3 |
| ication 102D, Measurement and Evaluation in Secondary Education | | 2 |
| ication 130, Educational Psychology | | 2 |
| ication 100B-PE, Methods in Physical Education (Men) and methods in the minor subject | | 3 |
| ication 115A, History and Philosophy of Education | | 2 |
| ication 116, Directed Teaching | | 6 |
| logy 165, Human Heredity | | 2 |
| sical Education: | | |
| 145, 146, 147, 148, Professional Activities | 8 | |
| 155, Applied Anatomy and Kinesiology | 3 | |
| 168, Physiology of Exercise | 3 | |
| 170, Recreational Leadership | 3 | |
| 177, Ind. Program Adaptation | 3 | |
| 190, Adm. of Phys. Ed. in Secondary Schools | 3 | |
| 199, Special Study in Health, Recreation or Phys. Ed.—Recommended | 2–3 | |
| | | 25–27 |
| ior | | 9 |
| ctives | | 1–4 |
| | | 60 |

### Summary

| | Un |
|---|---|
| English 1 and 2 | 6 |
| Speech Arts 2A | 3 |
| Natural Science | 9- |
| Social Science | 9- |
| Psychology 1 | 3 |
| Health Education 21, 65, 151 | 7 |
| Physical Education 41, 42, 43, 44, 51, 53, 72, 145, 146, 147, 148, 155, 168, 170, 177, 190, 199 | 40 |
| Education 100B-PE, 102C, 102D, 115A, 115B, 116, 130 | 20 |
| Zoology 165 | 2 |
| Minor | 15 |
| Electives | 0- |
| | 120 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (WOMEN)

This course leads to the A.B. Degree and to the Special Secondary Credential Physical Education which entitles the holder to teach physical education in sen high, junior high, and elementary schools.

### Lower Division

| | Un |
|---|---|
| Social Science (see page 18) | 9- |
| Natural Science (including Zoology 1A, General, or equivalent, Physiology 1A, Human Physiology, Zoology 8, Human Anatomy, and a physical science if needed. (See page 18) | 9- |
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 6 |
| Psychology 1, General | 3 |
| Health Education 21, Principles of Healthful Living | 2 |
| Speech Arts 2A, Fundamentals of Public Speaking | 3 |
| Physical Education: | |
| 1A, Fundamental Skills | |
| 2A, Folk Dancing | |
| 3A-3B, Modern Dance | 1 |
| 4, Fieldball, Soccer, and Speedball | |
| 5, Softball, Volleyball, and Hockey | |
| 6, Basketball | |
| 11A, Ballroom Dancing | |
| 12A-12B, Advanced Modern Dance | 2 |
| 13A, Archery | |
| 14A, Badminton | |
| 18A, Tennis | |
| 21, Life Saving | |
| 51, First Aid and Safety Education | 2 |
| 53, Physical Education in the Elementary School | 2 |
| 72, Introduction to Physical Education | 2 |
| Minor (see page 23) | 6 |
| Electives (Recommended electives: Art 61B, Health Education 90, Health Education 65, Home Arts 61A-61B, Music 1A) | 2- |
| | 60 |

### Upper Division

| | *Units* |
|---|---|
| hysical Education: | |
| 155, Applied Anatomy and Kinesiology | 3 |
| 156A-156B, Sports Methods | 4 |
| 160, Teaching of Body Mechanics | 2 |
| 161, Folk Dancing Materials and Advanced Techniques | 2 |
| 164A-164B, Methods in Modern Dance | 4 |
| 168, Physiology of Exercise | 3 |
| 170, Recreational Leadership | 3 |
| 177, Individual Program Adaptations | 3 |
| 185, Techniques of Individual Sports | 1 |
| 190, Administration of Physical Education in Secondary Schools | 3 |
| ealth Education 151, Health Education for Teachers | 2 |
| ducation: | |
| 115B, Secondary Education | 3 |
| 102C, Growth and Development of the Adolescent | 3 |
| 102D, Measurement and Evaluation in Secondary Education | 2 |
| 130, Educational Psychology | 2 |
| 100B-PE, Methods in Physical Education (Women) and methods in the minor subject | 3 |
| 115A, History and Philosophy of Education | 2 |
| 116, Directed Teaching | 6 |
| inor (see page 23) | 9 |
| | 60 |

### Summary

| | |
|---|---|
| ducation 115B, 102C, 102D, 130, 100B-PE, 115A, 116 | 21 |
| nglish 1 and 2 | 6 |
| ealth Education 21, 151 | 4 |
| atural Science | 9–12 |
| hysical Education | 42 |
| sychology 1 | 3 |
| ocial Science | 9–12 |
| peech Arts 2A | 3 |
| inor | 15 |
| lectives | 0–6 |
| | 120 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN SPEECH ARTS

The following program when satisfactorily completed will lead to the A.B. egree with Special Secondary Credential in Speech Arts.

### Lower Division

| | *Units* |
|---|---|
| ocial Science (see page 18) | 9–12 |
| atural Science (see page 18) | 9–12 |
| nglish 1, Freshman Composition, and 2, Freshman Literature or optional course | 6 |
| sychology 1, General | 3 |
| ealth Education 21, Principles of Healthful Living | 2 |
| hysical Education (activity courses) | 2 |
| peech Arts 2A, 2B, 11A, 11B, 60A, 60B | 6 |
| peech Arts 55A-55B or 56A-56B or 55A-56A or 55A-56B | 6 |
| peech Arts 61A, 61B, 63A, 63B, 57A, 1 | 3 |
| peech Arts electives | 5 |
| inor | 6 |
| lectives | 0–3 |
| | 60 |

### Upper Division

| | *Un* |
|---|---|
| Speech Arts 150 and 179 | |
| Speech Arts electives, selected from Speech Arts 108, 140A, 155, 158A, 159A, 161 163, 192A or 192B | |
| Speech Arts electives | |
| Upper Division electives selected from upper division English Literature | |
| Minor | |
| Health Education, Principles of Healthful Living | 2 |
| Education: | |
| 115B, Secondary Education | 3 |
| 102C, Growth and Development of the Adolescent | 3 |
| 102D, Measurement and Evaluation in Secondary Education | 2 |
| 130, Educational Psychology | 2 |
| 100B-SA, Methods in Speech Arts and methods in the minor subject | 3 |
| 115A, History and Philosophy of Education | 2 |
| 116, Directed Teaching | 6 |
| Electives | 4 |
| | 60 |

### Summary

| | |
|---|---|
| Social Science | 9– |
| Natural Science | 9– |
| English 1 and 2 | 6 |
| Psychology 1 | 3 |
| Health Education 21 and 151 | 4 |
| Physical Education | 2 |
| Speech Arts, major | 38 |
| Upper division English Literature | 6 |
| Education 100B-SA, 102C, 102D, 115A, 115B, 116, 130 | 21 |
| Minor | 15 |
| Electives | 0– |
| | 120 |

## SPECIAL SECONDARY CREDENTIAL IN CORRECTION OF SPEECH DEFECTS

This credential is granted only to students who can verify two years of successf teaching experience or four semester hours of superior student teaching completed an approved teacher education institution and who hold a valid California teacher certificate, credential, or life diploma of elementary or secondary school grade. Su students must show credit in the following subjects:

### Lower Division

| | *Uni* |
|---|---|
| Psychology 1, General | 3 |
| Speech Arts 2A, Fundamentals of Public Speaking, or equivalent | 3 |
| Speech Arts 11A or 11B, Interpretation | 3 |
| Speech Arts electives | 6 |

### Upper Division

| | |
|---|---|
| Speech Arts 150, Phonetics | 3 |
| Speech Arts 221, Articulatory Problems of Speech or Education 176, Problems of Speech Correction and Articulation | 3 |
| Speech Arts 179A-179B or Education 179A-179B, Nervous Speech Disorders | 6 |
| Psychology 131, Psychological Foundations of Personality | 2 |

# CURRICULA LEADING TO THE GENERAL SECONDARY SCHOOL CREDENTIAL

## INFORMATION CONCERNING THE GENERAL SECONDARY SCHOOL CREDENTIAL

A candidate for this credential must complete the requirements for the bachelor's gree from an accredited institution with a major and a minor commonly taught in secondary schools of California. Admission to candidacy for this credential should sought during the second semester of the sophomore year or upon admission to San ego State College with advanced or graduate status. Refer to page 25 for require- nts for admission to teacher education programs.

Students desiring a major in art, business education, music, physical education or eech arts should complete the requirements for the Special Secondary Credential in respective area desired, then continue with the graduate program. Refer to pages 39 48 for further details regarding these majors.

Students desiring one of the other areas as a major for which San Diego State llege is authorized (refer to page 25 for a complete list of majors and minors author- d) should complete a program leading to the A.B. Degree at the end of four years d the General Secondary Credential upon completion of the graduate year require- nts outlined on the following pages.

Any person desiring this credential should consult with the Director of Secondary ucation during his first semester of attendance at San Diego State College.

## RECOMMENDED PROGRAM FOR THE GENERAL SECONDARY SCHOOL CREDENTIAL

| | *Units* |
|---|---|
| Education 102C, Growth and Development of the Adolescent | 3 |
| Education 115B, Principles of Secondary Education | 3 |
| Health Education 151, Health Education for Teachers | 2 |
| Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Education 130, Educational Psychology | 2 |
| Education 115A, History and Philosophy of Education | 2 |
| Education 100B, Methods of Teaching (in the major and minor subjects) | 3 |

The graduate work must consist of a minimum of 24 semester units of upper vision or graduate work including the following specific requirements:

1. At least 12 semester units must be completed at San Diego State College.
2. At least one course of graduate level work (200 number) in the major field.
3. Enough units to complete a 21 semester unit minor. Refer to page 25.
4. Professional Education—completion of the courses listed above and the following:

| | *Units* |
|---|---|
| Ed. 201, Curricular Problems of the Secondary School | 3 |
| Ed. 202, Guidance Problems of the Secondary School | 3 |
| Ed. 316, Directed Teaching (or equivalent) | 6 |

## AJORS AND MINORS FOR THE GENERAL SECONDARY CREDENTIAL

The following pages outline tentative programs for the majors and minors for ich San Diego State College is authorized to recommend for the General Secondary edential.

### ajor in Art

The requirements for the A.B. Degree and the Special Secondary Credential in t should be completed simultaneously. (Students transferring from another institu- n with the A.B. Degree and a major in art should consult with the departmental resentative for special program planning.) Refer to page 31 for the recommended gram for the Special Secondary Credential in Art. After the above requirements ve been met, and the candidate has been accepted by the art staff for graduate work in art, the candidate for the General Secondary Credential shall complete a gradu year (refer to page 25) including the following courses in his major:

| *Graduate Year* | *Un* |
|---|---|
| Art 200A-200B, Special Problems in Art | 4 |

## Minor in Art

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Art A-B, Drawing and Composition | 2– |
| Art 6A-6B, Design | 4 |
| Art elective (Art 14A, Lettering, recommended) | 0– |
| Aesthetics 50, Appreciation and History of Art | 2 |
| Aesthetics 5, Art Orientation, or Art 51, Survey of Mexican Art | 2 |

*Upper Division*

| | |
|---|---|
| Upper division electives in Art | 9 |
| Aesthetics 150, Appreciation and History of Art | 2 |

## Major in Business Education

The requirements for the A.B. Degree and the Special Secondary Credential in Business Education must be completed simultaneously. Refer to page 32 for the recommended program for the Special Secondary Credential in Business Education. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year (refer to page 25) including the following courses in his major:

*Graduate Year*

Select four units from the following:

| | |
|---|---|
| Commerce 203, Secretarial Administration | 2 |
| Commerce 213, Problems in Business Education | 2 |
| Commerce 223, Problems in Merchandising | 2 |
| Commerce 233, Administration and Supervision of Business Education | 2 |
| Commerce 260, Advanced Problem Analysis (Accounting) | 2 |

## Minor in Business Education

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

This minor is not approved as part of the requirements for the A.B. Degree unless the degree and a credential are awarded simultaneously. It is recommended as a second minor area only.

*Lower Division*

| | |
|---|---|
| Commerce 14A-14B, Principles of Accounting | 6 |
| Economics 1A-1B, Principles of Economics | 6 |

*Upper Division*

| | |
|---|---|
| Upper division commerce courses selected with approval of the departmental representative | 9 |

## Major in Chemistry

*Lower Division*

| | |
|---|---|
| Chemistry 1A-1B, General | 10 |
| Chemistry 5, Quantitative Analysis | 3 |
| Mathematics 7A-7B, Mathematical Analysis, or 3A-3B, Plane Analytic Geometry and First Course in Calculus, and 4A-4B, Second and Third Course in Calculus | 6–1 |
| Physics 2A-2B, General, and 3A-3B, Physcial Measurements (or 1A-1B-1C-1D, Principles) | 8–1 |

*Upper Division*

| | Units |
|---|---|
| Chemistry 101, 102, 103, Organic Chemistry | 10 |
| Chemistry 105, Advanced Quantitative Analysis | 3 |
| Chemistry 110A-110B, Physical Chemistry | 6 |
| Electives in upper division chemistry, or electives in a related field approved by the departmental representative | 5 |

*Graduate Year*

| | |
|---|---|
| Chemistry 200, Seminars | 4 |

### Minor in Chemistry

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Chemistry 1A-1B, General | 10 |
| Chemistry 5, Quantitative Analysis | 3 |
| Physics 2A-2B, General, and 3A-3B, Physical Measurements (or 1A-1B-1C-1D, Principles) | 8–12 |

*Upper Division*

| | |
|---|---|
| Chemistry 101, Organic | 4 |
| Electives in upper division chemistry selected with approval of departmental representative | 5 |

### Major in Economics

*Lower Division*

| | |
|---|---|
| Economics 1A-1B, Principles of Economics | 6 |
| Lower division year course in history, political science or sociology | 6 |

*Upper Division*

| | |
|---|---|
| Economics 100A-100B, Modern Economic Thought | 6 |
| Economics electives, including a maximum of 6 units in a related field approved by the departmental representative | 18 |

*Graduate Year*

| | |
|---|---|
| Economics 200A-200B, Seminar in Modern Economic Thought | 4 |

### Minor in Economics

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Economics 1A-1B, Principles of Economics | 6 |
| A year course in another social science area | 6 |

*Upper Division*

| | |
|---|---|
| Economics 100A, Modern Economic Thought | 3 |
| Upper division economics courses selected under the supervision of the departmental representative | 6 |

### Major in English

*Lower Division*

| | |
|---|---|
| English 1, Freshman Composition | 3 |
| English 6A-6B, The Study of Literature | 6 |
| English 56A-56B, Survey of English Literature or 60A-60B, The Literary Personality | 6 |

*Upper Division*

| | |
|---|---|
| Upper Division English courses selected under the supervision of the departmental representative | 24 |

*Graduate Year* Unit

One of the following seminars 2

English 201, Shakespeare
English 202, Mark Twain
English 221, Regionalism in American Literature
English 222, Utopias

English 192, The English Language (if not taken as an undergraduate) or 191, 195, or an additional seminar from the foregoing list 2–3

### Minor in English

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

Lower division English courses to be selected under supervision of departmental representative 12

*Upper Division*

Upper division English courses to be selected under the supervision of the departmental representative 9

### Minor in French

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

French A, B, C, D or equivalent 15–1
History 4A-4B, History of Modern Europe, or equivalent 6

*Upper Division*

French 101A-101B, Conversation and Composition 6
French Literature (select one course) 3

### Major in History

*Lower Division*

History 4A-4B, History of Modern Europe, or 8A-8B, History of the Americas, or 9A-9B, History of the Pacific Ocean Area 6

Political Science 1A-1B, Comparative Government, or Political Science 71A-71B, American Government and Politics, or Economics 1A-1B, Principles 6

Two of the above history courses are recommended for students planning to major in history, and it is suggested that History 4A-4B be included as one of the courses.

*Upper Division*

History 199, Special Course for Advanced Students 2
United States History course 3–6
Select from three of the following areas with approval of departmental representative 16–1

1. Ancient and Medieval
2. Modern European
3. Latin America
4. Pacific Area and Far East

*Graduate Year*

History 270A-270B, Seminar 2–2

### Minor in History

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed. A year course in United States History must be included.

*Lower Division*

History 4A-4B, History of Modern Europe, or 8A-8B, History of the Americas, or 9A-9B, History of the Pacific Ocean Area 6

Electives chosen from anthropology, economics, geography (except Geography 1, 3, 4), political science, sociology 6

*Upper Division*

Upper Division History selected with approved of departmental representative 9

### Major in Life Science

*Lower Division*

| | Units |
|---|---|
| Zoology 1A-1B, General | 8 |
| Botany 2A-2B, General | 8 |
| Zoology 20, Human Anatomy and Physiology | 3 |
| Chemistry 1A-1B, General, or 2A-2B, Fundamentals | 6–10 |
| Physics 2A-2B, General, and 3A-3B, Physical Measurements | 8 |
| Geology 1A, Physical, and Astronomy 1, Descriptive, recommended. | |

*Upper Division*

| | |
|---|---|
| Upper division Zoology and Botany, of which 6 units may be from a related field with the approval of the departmental representative | 24 |

*Graduate Year*

| | |
|---|---|
| Zoology 200, Seminar | 2 |
| Zoology 202, Hydrobiology, or Zoology 213, Advanced Studies in Ornithology | 2 |

### Minor in Life Science

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Biology 10A-10B, General Biology, or Zoology 1A-1B, General Zoology | 6–8 |
| Botany 2A-2B, General Botany | 8 |
| Chemistry 1A, General, or 2A-2B, Fundamentals | 5–6 |

*Upper Division*

| | |
|---|---|
| Upper division courses in Zoology and Botany to be selected with approval of the departmental representative | 9 |

### Minor in Mathematics

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Mathematics 7A-7B, Elementary Mathematical Analysis | 6 |
| Two courses selected from courses in related areas listed below | 6 |
| Or the following courses: | |
| Mathematics D, Trigonometry (or high school equivalent, for which pattern credit may be allowed) | 3 |
| Mathematics 3A, Plane Analytic Geometry | 3 |
| Mathematics 3B, First Course in Calculus | 3 |
| One course selected from courses in related areas | 3 |

*Courses in related areas:* Commerce 2, Mathematics of Finance; or Engineering 1A, Plane Surveying; or Engineering 21, Descriptive Astronomy; or Physics 1A, Mechanics of Solids; or Physics 2A, General.

*Upper Division*

| | |
|---|---|
| Upper division units in mathematics selected with the approval of the departmental representative | 9 |

One course in each of the areas, algebra, geometry, and history of mathematics, is desirable.

### Major in Music

The requirements for the A.B. Degree and the Special Secondary Credential in Music should be completed simultaneously. Students transferring from another institution with the A.B. degree and a major in Music should consult with the departmental representative for special program planning. Refer to page 33 for the recommended program for the Special Secondary Credential in Music. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year (refer to page 25) including 4 units selected from the following courses in his major:

| *Graduate Year* | *Unit* |
|---|---|
| Four units selected from the following: | |
| Music 200A-200B, Special Problems in Music | 2–2 |
| Music 203, Musicology | 2 |
| Music 206, Composition | 2 |

## Minor in Music

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Music 1A or equivalent, and 1B, Musicianship | 2–5 |
| Music 4A-4B, Elementary Harmony | 6 |
| Aesthetics 1A-1B, Survey of Music | 4 |
| Music activities selected from Music 11, 12, 13, 15, 20, 26, 30 | 0–2 |

*Upper Division*

Select 9 units with approval of departmental representative from:

| | |
|---|---|
| Aesthetics 102A-102B, Music History | 4 |
| Aesthetics 100, Great Music | 3 |
| Music 105A-105B, Advanced Harmony and Composition | 6 |
| Music 106, Counterpoint | 2 |
| Music 107, Form and Analysis | 2 |
| Music 119A, Instrumental Conducting | 1 |
| Music 120A, Vocal Conducting | 1 |
| Music 121A-121B, Instrumentation and Arranging | 4 |
| Music 117A-117B, Advanced Individual Study of Voice | 2 |
| Music 118A-118B, Advanced Individual Study of Piano or Organ | 2 |

## Major in Physical Education for Men

The requirements for the A.B. Degree and the Special Secondary Credential in Physical Education must be completed simultaneously. Refer to page 35 for the recommended program for the Special Secondary Credential in Physical Education. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year (refer to page 25), including the following courses in his major:

Select two courses from the following:

| | |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |

## Minor in Physical Education for Men

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

*Lower Division*

| | |
|---|---|
| Physical Education 51, First Aid and Safety Education | 2 |
| Physical Education 53, Physical Education in the Elementary Schools | 2 |
| Physical Education 72, Introduction | 2 |

*Upper Division*

| | |
|---|---|
| Professional Activity courses selected with approval of departmental representative | 2 |
| Physical Education 154, Principles and Administration of Physical Education in Secondary Schools | 3 |
| Physical Education 170, Recreational Leadership | 2 |

### Minor in Health Education for Men or Women

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

Students majoring in physical education may use this only as a second minor. Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | Units |
|---|---|
| *Lower Division* | |
| Physical Education 51, First Aid and Safety Education | 2 |
| Home Arts 61A, Nutrition | 2 |
| Health Education 65, Community Health | 3 |
| *Upper Division* | |
| Health Education 152, Health Education Programs | 3 |
| Health Education 153, Administration of School Health Program | 3 |
| Physical Education 199, Special Study in Health | 1–3 |

### Minor in Recreation for Men or Women

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

Students majoring in Physical Education may use this only as a second minor. Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | |
|---|---|
| *Lower Division* | |
| Physical Education 51, First Aid and Safety Education | 2 |
| Physical Education 53, Physical Education in Elementary Schools | 2 |
| Electives selected from Art 61B, Crafts, or from the fields of dance, drama or music | 2 |
| *Upper Division* | |
| Physical Education 165, Administration of Community Recreation | 3 |
| Physical Education 170, Recreational Leadership | 3 |
| Physical Education 199, Special Study in Physical Education or Recreation | 1–3 |

### Major in Physical Education for Women

The requirements for the A.B. Degree and the Special Secondary Credential in Physical Education must be completed simultaneously. Refer to page 36 for the recommended program for the Special Secondary Credential in Physical Education. After the above requirements have beeen met, the candidate for the General Secondary Credential shall complete a fifth year (refer to page 25) including the following courses in his major:

*Graduate Year*

Select two courses from the following:

| | |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education, and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |

### Minor in Physical Education for Women

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | |
|---|---|
| *Lower Division* | |
| Physical Education 1A, Fundamental Skills | ½ |
| Physical Education 1B, Folk Dancing | ½ |
| Physical Education 1C, Rhythmic Skills | ½ |
| Physical Education 1D, Team Sports | ½ |
| Physical Education 53, Physical Education in Elementary Schools | 2½ |
| Physical Education electives | 1½ |
| *Upper Division* | |
| Physical Education 156A-156B, Sports Methods | 4 |
| Physical Education 161, Folk Dancing Materials and Advanced Techniques | 2 |
| Electives selected from Physical Education 153, 170, 164A-164B | 3 |

### Major in Physical Sciences

This teaching major may be used as a major for the A.B. Degree if the lower and upper division requirements listed below are completed and the student has been admitted to candidacy for the General Secondary Credential and has completed at least nine units of professional courses in education by the date of degree candidacy.

*Lower Division*

| | *Units* |
|---|---|
| Chemistry 1A-1B, General Chemistry | 10 |
| Physics 1A-1B-1C-1D, Principles (or 2A-2B, General, and 3A-3B, Physical Measurements) | 8–12 |
| Mathematics 3A, Plane Analytic Geometry, 3B, First Course in Calculus, 4A, Second Course in Calculus (recommended 4B, Third Course in Calculus) | 9–12 |
| Biology 1, Survey | 3 |

*Upper Division*

| | |
|---|---|
| Twenty-four units in chemistry and physics, with a minimum of 9 units in each of these two departments. Six units may be selected from related fields with approval of the departmental representative | 24 |

*Graduate Year*

Select 4 units from the following:

| | |
|---|---|
| Chemistry 200, Seminar | 2–4 |
| Physics 200, Seminar | 2–4 |

### Major in Physics

*Lower Division*

| | |
|---|---|
| Physics 1A-1B-1C-1D, Principles, or equivalent | 12 |
| Chemistry 1A-1B, General | 10 |
| Mathematics 3A-3B, Plane Analytic Geometry and First Course in Calculus | 6 |
| Mathematics 4A-4B, Second and Third Course in Calculus | 6 |

*Upper Division*

| | |
|---|---|
| Physics 105A-B, Analytical Mechanics | 6 |
| Physics 110A, Principles of Electrostatics and Electromagnetism | 3 |
| Physics 102, Electronics, or 110B, Electromagnetism | 3 |
| Electives from upper division physics, with a maximum of 6 units selected from related areas upon approval of departmental representative | 12 |

*Graduate Year*

Select 4 units from the following:

| | |
|---|---|
| Physics 200, Seminars (both semesters) | 2–2 |

### Minor in Physics

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Physics 1A-1B-1C-1D, Principles, or equivalent | 12 |
| Chemistry 1A-1B, General | 10 |
| Mathematics 3A, Plane Analytic Geometry, 3B, First Course in Calculus, 4A-4B, Second and Third Course in Calculus | 12 |

*Upper Division*

| | |
|---|---|
| Upper division courses to be selected with approval of departmental representative | 9 |

### Major in Social Sciences

This teaching major may be used as a major for the A.B. Degree if the lower and upper division requirements listed below are completed and the student has been admitted to candidacy for the General Secondary Credential and has completed at least 9 units of professional courses in education by the date of degree candidacy.

*Lower Division*

A student must complete a minimum of 6 units in each of at least 3 fields he may select from the departments named below:

Economics
Geography
History
Political Science
Sociology and/or anthropology

*Upper Division*

A student must complete a minimum of 30 units with the approval of the departmental representative as follows:

| | Units |
|---|---|
| 1. A minimum of 12 units from any field named above | 12 |
| 2. A minimum of 6 units from each of two fields named above, excluding the field selected for the major upper division concentration | 12 |
| 3. Electives from social science fields | 6 |

*Graduate Year*

Select 4 units from the following:

| | |
|---|---|
| History 270A-270B, Seminar | 4 |
| Economics 200A-200B, Seminar in Modern Economic Thought | 4 |

### Minor in Spanish

A minimum of 21 semester units, of which at least 9 units be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Spanish, A, B, C, D or equivalent | 15–16 |
| History 4A-4B, History of Modern Europe, or 8A-8B, History of the Americas, or equivalent | 6 |

*Upper Division*

| | |
|---|---|
| Spanish 101A-101B, Conversation and Composition | 6 |
| Spanish Literature (select one course) | 3 |

### Major in Speech Arts

*Lower Division*

| | |
|---|---|
| Speech Arts 1, Voice and Diction, or 2A, Fundamentals of Public Speaking, or 2B, Extemporaneous Speaking, or 11A or 11B, Interpretation | 3 |
| Speech Arts 55A-55B, Elementary Acting, or 57A-57B, Radio Production, plus 2 units from 61, Intercollegiate Debate, or 63, Verse Choir | 6 |
| Speech Arts 56A-56B, Dramatic Production, or 60A-60B, Argumentation and Debate | 6 |

*Upper Division*

| | |
|---|---|
| Speech Arts 150, Phonetics | 3 |
| Speech Arts 154A-154B, History of the Theatre, or 155, Advanced Acting, and any first semester upper division course, or 140A-140B, Stage Design, or 179A-179B, Nervous Speech Disorders, or 192A-192B, Advanced Public Speaking | 6 |
| Speech Arts 179A-179B, Nervous Speech Disorders, or 158A or 158B, Advanced Radio Techniques, or 159A or 159B, Stage Direction, or 191, Organized Discussion (select two courses) | 6 |
| Speech Arts 108, Advanced Interpretation, or 118A or 118B, Playwriting, or 152A-152B, Stage Costume, or 154A or 154B, History of the Theatre, or 161, Advanced Argumentation | 3 |
| A maximum of 6 units may be selected from related fields with approval of departmental representative | 0–6 |

| *Graduate Year* | *Unit* |
|---|---|
| Select four units from the following courses: | |
| Speech Arts 260, Seminar in Interpretation | 2 |
| Speech Arts 221, Seminar in Articulatory Problems in Speech | 2 |
| Speech Arts 245, Seminar in Technical Practice | 2 |
| Speech Arts 259, Seminar in Stage Direction | 2 |
| Speech Arts 200, Seminar in History of Oratory | 2 |

### Minor in Speech Arts

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| Speech Arts 2A-2B, Fundamentals of Public Speaking and Extemporaneous Speaking; or 55A-55B, Elementary Acting; or 56A-56B, Dramatic Production; or 55A, Elementary Acting, and 2A, Fundamentals of Public Speaking, or 2B, Extemporaneous Speaking; or 55A, Elementary Acting, and 11A or 11B, Interpretation, or 1, Voice and Diction; or 57A-57B, Radio Production | 12 |
| *Upper Division* | |
| Upper division Speech Arts electives selected with the approval of departmental representative | 9 |

# CURRICULA LEADING TO CREDENTIALS IN ADMINISTRATION AND SUPERVISION

## CURRICULA LEADING TO CREDENTIALS IN ELEMENTARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the general requirements of the State of California for all degree the candidate shall meet the following requirements:

(a) Possess a valid General Elementary Credential.
(b) Present written evidence of two years of successful teaching experience i the elementary schools.
(c) Complete 30 semester units for the Administration Credential (24 unit for the Supervision Credential) of upper division or graduate work i addition to the holding of the General Elementary Credential. These unit shall include specific courses designed by the State Department of Edu cation and the college.
(d) Maintain a grade point average of 1.75.
(e) Complete a minimum of 18 units of work in residence at San Diego Stat College.
(f) Make formal application to the Director of Elementary Education.
(g) Earn the recommendation of the Department of Education.

Students applying for the Elementary Administration or Supervision Credential should register with the office of the Dean of Professional Education and confer wit the Director of Elementary Education concerning the courses which may be offere in satisfaction of the requirements. Outlines of pattern requirements for either th Elementary Supervision or Administration Credentials may be obtained by writin the Director of Elementary Education.

## SPECIAL SUBJECT SUPERVISION CREDENTIAL

This credential is available for persons who wish to supervise in a special sub ject area. Those desiring this credential should see the Dean of Professional Education

# THE BACHELOR OF EDUCATION DEGREE AND THE GENERAL ELEMENTARY CREDENTIAL

## ELIGIBILITY FOR CANDIDACY

Teachers holding the Provisional General Elementary School Credential are ligible for candidacy for the Bachelor of Education Degree. The purpose of this degree s to increase the professional competence of teachers who do not hold a bachelor's egree. The educational program of each applicant shall be determined on the basis f his previous preparation and of the services he is to render. In the period of pro- ssional preparation the applicant shall be guided into those learning experiences esigned to meet his cultural and professional needs.

## MINIMUM REQUIREMENTS

An applicant for the general elementary credential and the Bachelor of Educa- on Degree shall comply with the procedures for application and with the requirements r personal qualifications and general training and shall have completed a program cluding the following minimum requirements:

a. A four-year college course of 120 semester units, or the equivalent.

b. Eighteen semester units, or the equivalent, of professional work in education, constituting an organized program designed to prepare candidates in the following areas:

(1) The evolution of educational thought and practice as to the function of the school in a democratic society, with emphasis on the elementary school.

(2) The nature of individual growth and development; the psychological aspects of learning; child study, with emphasis on directed observation of children; mental hygiene and personality development; parent education; guidance practices.

(3) The selection and arrangement of learning experiences, instructional materials, learning methods and appraisal techniques related to all statutory requirements for teaching, including reading, writing, spelling, language study, arithmetic, geography, history of the United States and of California, civics including the Constitution of the United States, music, art, physical education, healthful living, morals and manners, safety education, and fire prevention.

(4) The use of audio-visual aids in instruction.

c. Directed teaching in the elementary school, eight semester units, or the equivalent, under the supervision of superior teachers in actual classroom situations of the elementary school level.

d. Sixty-one semester units or the equivalent in basic subject fields, distributed approximately as follows:

(1) *Social Studies.* Twelve semester units, or the equivalent, with emphasis upon current economic, political, and social problems and world history and geography, sociology and anthropology. The legal requirement in United States Constitution and American history, institutions, and ideals shall be included in the social studies program.

(2) *Science.* Twelve semester units, or the equivalent, in the fields of physical and biological science, with emphasis upon the study and use of the environment.

(3) *English*, including speech. Twelve semester units, or the equivalent, including oral and written expression, world literature, children's literature, dramatics, detection and correction of speech defects, and the use of books and libraries.

(4) *Mathematics.* Three semester units, or the equivalent, including subje matter and techniques essential in the teaching of mathematics in th elementary school.

(5) *Health and Hygiene.* Three semester units, or the equivalent, includin personal hygiene, subject matter and techniques essential in health edu cation to elementary school pupils.

(6) *Physical Education.* Three semester units, or the equivalent, includin subject matter and techniques essential in the teaching of physical educa tion to elementary school pupils.

(7) *Music.* Eight semester units, or the equivalent, including content an techniques appropriate for the elementary school.

(8) *Art.* Eight semester units, or the equivalent, in graphic art and indus trial arts applicable to learning experiences appropriate for elementar school children.

e. The remaining units necessary to complete the requirements for the Bachelo of Education degree shall be distributed among those offerings of the institu tion that best serve the cultural and professional needs of the candidate.

## EVALUATION OF TEACHING EXPERIENCE AND SUBJECT MATTER FIELDS

a. A candidate with two or more years' teaching experience may be awarde a maximum of 8 semester units of credit, or the equivalent, in directed teachin provided he demonstrates satisfactory skill to a representative of the institu tion under whose direction he is completing his degree program, or provide other conditions set by the institution to insure classroom skill are met. Thi credit shall not be applied until the candidate has completed at least 11 semester units, or the equivalent, of his program.

b. Credit toward the B. Ed. degree may be secured by passing comprehensiv examinations in the fields of study mentioned in paragraphs (b) and (d above.

## INSTITUTION AND RESIDENCE REQUIREMENTS

a. A minimum of 30 semester units, or the equivalent, must be secured from th college conferring the degree.

b. At least 12 semester units, or the equivalent, must be earned in campus resi dence course work at the college conferring the degree and must be secure after completion of at least 90 semester units, or the equivalent.

c. A maximum of 30 units may be secured by examination.

# PREPROFESSIONAL AND VOCATIONAL CURRICULA

Preprofessional and vocational curricula, ranging in length from two to four urs of collegiate work, are offered. Curricular outlines of preprofessional study, ich are presented on the following pages, meet the typical requirements for admisn to professional schools. Students expecting to complete their professional training other institutions should modify the suggested outlines of study to meet the requirents of the professional schools of their choice. Curricular outlines for complete ining leading to vocations are also presented on the following pages.

Curricular outlines are presented for agriculture, commerce, dentistry, education, ineering, home arts, inter-American relations, journalism, law, life science occuions, medicine, nursing, optometry, pharmacy, recreation, and veterinary science. idents desiring to modify these curricular outlines in terms of liberal arts majors uld consult the advisers in the respective curricula.

## PRE-AGRICULTURAL CURRICULA

The high school program should include the following subjects: elementary ebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonometry, unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit; foreign guage, 3 units in one language.

Students should ascertain the lower division requirements of the agricultural ege they expect to enter.

### CURRICULUM IN PLANT SCIENCE

#### Freshman Year

| | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| sical Education (activity courses) | ½ | ½ |
| lth Education 21, Principles of Healthful Living | 2 | – |
| mistry 1A-1B, General | 5 | 5 |
| any 2A-2B, General | 4 | 4 |
| sics 2A-2B, General | 3 | 3 |
| lish 1, Freshman Composition | – | 3 |
| tive | 2 | 1 |
| | 16½ | 16½ |

#### Sophomore Year

| | | |
|---|---|---|
| sical Education (activity courses) | ½ | ½ |
| nomics 1A-1B, Principles | 3 | 3 |
| lish 2, Freshman Literature, or optional course | – | 3 |
| mistry 101, Elementary Organic, and 102, Laboratory | 4 | 3 |
| logy 1A, Physical, or 2A, General | 3 | – |
| teriology 1, General | – | 4 |
| ogy 1A, General | 4 | – |
| chology 1, General | – | 3 |
| tive | 2 | – |
| | 16½ | 16½ |

## CURRICULUM IN ANIMAL SCIENCE

### Freshman Year

| | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sen* |
| Physical Education (activity courses) | ½ | ½ |
| Chemistry 1A-1B, General | 5 | 5 |
| Zoology 1A-1B, General | 4 | 4 |
| Physics 2A-2B, General | 3 | 3 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| | 15½ | 15½ |

### Sophomore Year

| | | |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Psychology 1, General | 3 | – |
| Economics 1A-1B, Principles | 3 | 3 |
| Bacteriology 1, General | – | 4 |
| Botany 2A, General | 4 | – |
| Chemistry 101, Elementary Organic, and 102, Laboratory | 4 | 3 |
| Zoology 100, Embryology | – | 3 |
| Zoology 20, Human Anatomy and Physiology, or 8, Human Anatomy | – | 3 |
| | 16½ | 16½ |

## COMMERCE CURRICULUM

The first two years of the curriculum are introductory. During this period the student acquires a basis for further study and an understanding of the place that business fills in modern economic life. The choice of the major field should be made at the beginning of the junior year. The student then follows a program of studies that is designed to provide a vocational ability in at least one particular area.

Students desiring to continue secretarial training on a four year basis should consult with the Chairman of the Department.

### Lower Division

| | *Units* |
|---|---|
| Physical Education (activity courses) | 2 |
| English 8, Business English, and 2, Freshman Literature, or optional course | 6 |
| Health Education 21, Principles of Healthful Living | 2 |
| Psychology 1, General | 3 |
| Natural Sciences (including Geography 1, Elements) | 9–12 |
| History, Political Science, or Sociology | 6 |
| Geography 10, Economic | 3 |
| Economics 1A-1B, Principles | 6 |
| Commerce 2, Mathematics of Finance | 3 |
| Commerce 14A-14B, Principles of Accounting | 6 |
| Commerce 18A-18B, Commercial Law | 6 |
| Electives | 0–8 |

Marketing subfield should include:

| | |
|---|---|
| Commerce 20, Consumer Economics | 3 |
| Commerce 24, Merchandising | 3 |
| Commerce 25, Salesmanship | 3 |
| Commerce 27, Advertising Principles | 3 |
| Art 7, Line, Color, Display | 3 |

(Geography 10 and Commerce 2 are not required of students who elect the marketing subfield.)

### Upper Division

| | |
|---|---|
| Minor | 9 |
| Major | 24 |

Including: Economics 111, Economic History of the United States; Economics 140, Statistics; Commerce 121, Business Administration; and 15 units selected from one of the following groups:

A. Accounting: Commerce 160A-160B, 161A-161B, 162, 164A-164B, 165A-165B.

B. Banking and Finance: Commerce 133, 134, 137; Economics 131, 135, 142.

C. Business Administration: Commerce 123, 125, 126, 127, 133, 134, 137, 153, 184; Economics 128, 142, 150, 170.

D. Marketing: Commerce 123, 153, 184, 185, 186, 187A, 187B, 188, 189; Home Arts 160A-160B.

Electives (at least 7 of which must be upper division) 17–27

# PRE-DENTAL CURRICULUM

Candidates for a degree in dentistry should ascertain the entrance requireme of the dental college to which they expect to transfer and should make whate changes in the following typical requirements that may seem desirable in satisfyi the requirements of the specific dental college.

The high school program should include the following subjects: elementa algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; forei language, 3 units in one language; mechanical drawing, 1 unit.

## Freshman Year

| | *Units* *1st Sem.* | *2 Se* |
|---|---|---|
| Physical Education (activity courses) | ½ | |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Chemistry 1A-1B, General | 5 | 5 |
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Physical Measurements | 1 | 1 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Psychology 1, General | – | 3 |
| Elective | 0–2 | 0– |
| | 16½ | 16 |

## Sophomore Year

| | | |
|---|---|---|
| Physical Education (activity courses) | ½ | |
| Chemistry 101, Elementary Organic, and 102, Laboratory | 4 | 3 |
| Zoology 1A-1B, General | 4 | 4 |
| Mathematics C, Intermediate Algebra, and D, Trigonometry | 3 | 3 |
| Social Science (year course selected from Anthropology 1A-1B, General; Economics 1A-1B, Principles; History 4A-4B, Modern Europe, or 8A-8B, the Americas, or 17A-17B, American Civilization; Political Science 1A-1B, Comparative Government) | 3 | 3 |
| Electives (a course in public speaking is recommended) | 2 | 3 |
| | 16½ | 16 |

The following courses are suggested for a third year in preparation for dentist for those who fail to receive an acceptance from a dental college after completing t prescribed 60 units.

## Junior Year

| | | |
|---|---|---|
| Chemistry 5, Quantitative Analysis | 3 | – |
| Zoology 106, Comparative Anatomy of the Vertebrates | 4 | – |
| Zoology 100, Embryology | – | 4 |
| Art 119A, Ceramics (see prerequisite) | 2 | – |
| Psychology 11, Applied | – | 3 |
| Additional Year Course in Social Science | 3 | 3 |
| Electives | 4 | 6 |
| | 16 | 16 |

The curriculum for Dental Hygiene is essentially the same as the above for pr dentistry.

## GENERAL ENGINEERING CURRICULUM

The four year curriculum in general engineering leads to the A.B. Degree in eneral Engineering and is designed to give students a sound training in the fundamentals of engineering education plus the broader training and experiences which onstitute a liberal arts education.

Students may stay at San Diego State College for less than four years and hen complete their training for professional engineering at the University of California or some other engineering school. In such cases the curriculum for the first two ears should be essentially the same as that outlined below, but the student should lan his work carefully with the help of a faculty adviser to insure satisfaction of ll requirements.

In the freshman and sophomore years all general engineering students must take he courses listed below. In the junior and senior years optional programs are available hich provide for some specialization in aeronautical, chemical, civil, electrical, electronic, or mechanical engineering or in engineering physics or engineering economics.

The general engineering curriculum follows the plan of the general major. (See age 20.) This requires completion during the junior and senior years of a minimum of 6 upper division units chosen from three different fields with no more than 15 units r less than 6 units from any one field to count as part of the minimum of 36 units. n chemical engineering, the three fields are engineering, physics, and chemistry. In ll the other optional upper division programs, the three fields which make up the eneral engineering major are engineering, physics, and economics. Training in mathematics beyond the minimum requirements is very desirable, and it is recommended hat at least Mathematics 119, Differential Equations, be included among the upper ivision electives. In the field of physics, a maximum of 6 units may be chosen from athematics 118, Advanced Calculus, Mathematics 119, Differential Equations, and athematics 124, Vector Analysis. For elective courses in economics it is recommended at at least two courses be selected from Economics 131, 150, and 170.

The general engineering curriculum allows considerable latitude in the choice of lectives in the junior and senior years. Students are encouraged to choose electives hich suit their particular needs in broadening their training in the field of general ducation. The choice of electives must follow a logical plan approved by a faculty ommittee.

The high school program should include the following subjects: elementary lgebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; solid geometry, unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, unit.

### Lower Division

Courses must be included to satisfy all college requirements for the A.B. Degree, cept the foreign language requirement. (See page 17.)

| | *Units*<br>*1st Sem.* | <br>*2d Sem.* |
|---|---|---|
| *reshman Year* | | |
| Math. 3A-3B, Analytic Geometry and First Course in Calculus | 3 | 3 |
| Physics 1A-1B, Mechanics of Solids and Fluids, and Heat | 3 | 3 |
| Chemistry 1A-1B, General Chemistry | 5 | 5 |
| English 1, Freshman Composition | 3 | – |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Biology 1, Survey of Biology (unless taken in high school) | – | 3 |
| Physical Education (activity courses) | ½ | ½ |
| Electives | – | 2 |
| | 16½ | 16½ |
| *ophomore Year* | | |
| Math. 4A-4B, Second and Third Courses in Calculus | 3 | 3 |
| Physics 1C-1D, Electricity and Magnetism, Sound and Light | 3 | 3 |
| Economics 1A-1B, Principles of Economics | 3 | 3 |
| Engineering 21, Descriptive Geometry | 3 | – |
| Physical Education (activity courses) | ½ | ½ |
| Other courses to complete lower division preparation, including Psychology 1, English, and Social Science (see page 17) | 4 | 7 |
| | 16½ | 16½ |

One of the following groups of courses is required, dependent upon the field specialization desired in the upper division:

| For Civil Engineering | Uni |
|---|---|
| Engineering 1A-1B, Plane Surveying | 6 |
| Astronomy 3, Surveyor's Course in Practical Astronomy | 3 |
| For Mechanical, Electrical and Aeronautical Engineering | |
| Engineering 1A, Plane Surveying | 3 |
| Engineering 22, Machine Drawing | 3 |
| Elective | 3 |
| For Chemical Engineering | |
| Chemistry 5, Quantitative Analysis | 3 |
| Chemistry 101, Organic Chemistry | 4 |
| Elective | 2 |
| For Engineering Economics | |
| Commerce 14A-14B, Principles of Accounting | 6 |
| Elective | 3 |
| For Engineering Physics | |
| Engineering 22, Machine Drawing (recommended) | 3 |
| Elective | 6 |

Students should, if possible, complete all of the college lower division requirements in the sophomore year. (See page 17.) Any not completed then must be completed in the junior year.

## Upper Division

The choice of a field of specialization and the choice of electives must be approve by faculty committee appointed by the Chairman of the Physical Science Division Students normally will submit proposed programs for formal committee approva before the beginning of the junior year. Any subsequent deviations from this pla must be approved by the committee.

All upper division requirements of the college for the A.B. Degree must be met These include:

Examination in American History and U. S. Constitution. (See page 21.)

Completion of the requirements for the General Major. (See page 20.)

The courses required for general engineering include a core group required fo all general engineering students plus those required for each field of specialization These are indicated below:

### Required for All General Engineering Students

| *Junior Year* | Unit |
|---|---|
| Engineering 102A-102B, Analytical Mechanics | 6 |
| Engineering 100A-100B, Elements of Electrical Engineering | 6 |
| Engineering 140, Strength of Materials | 3 |
| *Senior Year* | |
| Engineering 128, Applied Engineering Thermodynamics | 3 |
| Engineering 105, Hydraulics | 3 |
| Engineering 198, Senior Report | 2 |

### Additional Requirements for Various Fields of Specialization

*Aeronautical Engineering*

| *Junior Year* | |
|---|---|
| Engineering 122, Machine Design | 3 |
| Engineering 141, Materials of Engineering Laboratory | 2 |
| Elective—including 6 units upper division economics | 10 |
| *Senior Year* | |
| Engineering 156, Aerodynamics | 3 |
| Engineering 142, Stress Analysis | 3 |
| Engineering 129, Heat Power Laboratory | 2 |
| Elective—including 9 units upper division economics and/or physics | 14 |

*Chemical Engineering*

| *Junior Year* | *Units* |
|---|---|
| Chemistry 102, Organic Chemistry Laboratory | 3 |
| Chemistry 110A-110B, Physical Chemistry | 6 |
| Engineering 141, Materials of Engineering Laboratory | 2 |
| Elective | 4 |

| *Senior Year* | |
|---|---|
| Chemistry 144A-144B, Chemical Engineering | 6 |
| Elective | 16 |

*Civil Engineering*

| *Junior Year* | |
|---|---|
| Engineering 130, Route and Construction Surveying | 3 |
| Engineering 141, Materials of Engineering Laboratory | 2 |
| Elective—including 6 units upper division economics | 10 |

| *Senior Year* | |
|---|---|
| Engineering 131, Advanced Surveying | 3 |
| Engineering 106, Hydraulics Laboratory | 2 |
| Elective—including 9 units upper division economics and/or physics | 17 |

*Electrical Engineering*

| *Junior Year* | |
|---|---|
| Engineering 101A-101B, Electrical Engineering Laboratory | 4 |
| Elective—including 6 units upper division economics | 11 |

| *Senior Year* | |
|---|---|
| Physics 107, Electrical Measurements | 2 |
| Physics 102, Electronics | 3 |
| Elective—including 4 units upper division economics and/or physics | 17 |

*Mechanical Engineering*

| *Junior Year* | |
|---|---|
| Engineering 122, Machine Design | 3 |
| Engineering 141, Materials of Engineering Laboratory | 2 |
| Elective—including 6 units upper division economics | 10 |

| *Senior Year* | |
|---|---|
| Engineering 129, Heat Power Laboratory | 2 |
| Engineering 106, Hydraulics Laboratory | 2 |
| Engineering 145, Internal Combustion Engines | 3 |
| Elective—including 9 units upper division economics and/or physics | 15 |

*Engineering Economics*

| *Junior Year* | |
|---|---|
| Commerce 121, Business Administration | 3 |
| Economics 133, Corporation Finance | 3 |
| Commerce 18A, Commercial Law | 3 |
| Economics 140, Statistics | 3 |
| Elective | 3 |

| *Senior Year* | |
|---|---|
| Economics 170, Government and Business | 3 |
| Commerce 150, Labor Problems | 3 |
| Economics 131, Public Finance | 3 |
| Electives | 13 |

| | Unit |
|---|---|
| *Engineering Physics* | |
| *Junior Year* | |
| Mathematics 119, Differential Equations | 3 |
| Elective—including 6 units upper division economics | 12 |
| *Senior Year* | |
| Physics 102, Electronics | 3 |
| Physics 107, Electrical Measurements | 2 |
| Physics 110A, Electricity and Electromagnetism | 3 |
| Elective | 14 |
| *Electronics Engineering* | |
| *Junior Year* | |
| Physics 102, Basic Electronics | 3 |
| Engineering 104 or Physics 104, Communications | 2 |
| Physics 122, Electronics Laboratory | 2 |
| *Senior Year* | |
| Engineering 124 or Physics 124, Radio Measurements | 2 |
| Engineering 150, Industrial Electronics | 2 |
| Physics 152, Advanced Electronics | 2 |
| Physics 107, Electrical Measurements | 2 |

The upper division requirements for the General Engineering curriculum may b met by various combinations of courses other than those outlined above. For example the core group of required upper division courses may be combined with selected uppe division courses in Astronomy, Geology or Mathematics to make up the total of 3 upper division units required. Any such deviations from the curricula outlined abov must be approved by the Chairman of the Division of Physical Sciences.

# HOME ARTS CURRICULUM

The Home Arts curriculum is planned to meet the needs of those students who ish to apply their knowledge to the various problems of home living. This curriculum ill lead to a general major in Liberal Arts, which means it will be combined with two ther fields. (See General Major Requirements, page 20.) By selecting the right comination of courses, it will be possible to prepare for professional work in journalism, ıdio, community recreation, home service in industry, merchandising, and several hases of social work. The student should consult the Dean of General Education for is approval and then see the Chairman of the Home Arts Department for help in lanning a course of study.

## Lower Division

| | Units | |
|---|---|---|
| *reshman Year* | *1st Sem.* | *2d Sem.* |
| Physical Education (activity courses) | ½ | ½ |
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 3 | 3 |
| Psychology 1, General | 3 | – |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Chemistry 2A-2B, General | 3 | 3 |
| Art 6A, Design | 2 | – |
| Home Arts 1, General | – | 3 |
| Electives (See lower division requirements, page 17. Student should also see prerequisites for upper division courses for the general major) | 3 | 7 |
| | 16½ | 16½ |

| *ophomore Year* | | |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Home Arts 61A-61B, Nutrition and Laboratory | – | 3 |
| Home Arts 5, Food Preparation | 3 | – |
| Home Arts 10, Fundamentals of Clothing | – | 2 |
| Sociology 50A-50B, Introduction | 3 | 3 |
| Electives (completion of lower division requirements and prerequisites for upper division courses for the general major) | 10 | 8 |
| | 16½ | 16½ |

Preparation for U. S. Constitution and American History requirement.

Suggested electives for the first two years:

Biology 10A-10B (6), or Biology 1 (3), Zoology 20 (3)
Physics 2A-2B (6)
Speech Arts 2A-2B (6)
History 17A-17B (6)
Health Education 90 (1)
Art 6B (2), 61B (2)

## Upper Division

Home Arts courses to satisfy the general major should be selected from the llowing:

| | *Units* |
|---|---|
| Home Arts 101, Clothing Selection | 3 |
| Home Arts 105, Family Meals | 3 |
| Sociology 108, Marriage and the Family | 3 |
| Home Arts 160A, Merchandise Analysis—Textiles | 2 |
| Home Arts 160B, Merchandise Analysis—Non-Textiles | 2 |
| Education 102B, Child Growth and Development | 3 |

# INTER-AMERICAN RELATIONS

The purpose of this curriculum is (1) to furnish a basis for a more intelligent an effective understanding of the opportunities and problems of international relations i the western hemisphere; (2) to provide facilities for a basic education and training fo a business or professional career which involves international relations.

Competition for opportunities of service in international affairs is severe. Th student who plans a career in this field should therefore organize his electives to provid for a concentration in some area of work in which there are greater vocational opportu nities. Preparation for employment as a foreign representative of an American busines organization implies concentration in economics. The student who pursues this curricu lum as a guide for training for the foreign service in consular, vice consular, secretaria and other public offices should include additional courses in foreign language, histor political science, geography, and economics to furnish more effective preparation fo the comprehensive competitive examinations required for appointment to the Servic and for entrance to the Foreign Officers Training School at Washington, D. C.

This program should be completed either with a major in economics or a genera major. Consult the Dean of General Education for details.

The high school program should include the following subjects: algebra, 1 unit plane geometry, 1 unit; foreign language, 3 units in one language, preferably Spanish

## Freshman Year

| | Units 1st Sem. | Units 2d Sem |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | 2 | – |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Spanish | 0–5 | 0–5 |
| Natural Science (see page 18) | 3–5 | 3–5 |
| History 8A-8B, History of the Americas | 3 | 3 |
| Psychology 1, General | – | 3 |
| Elective | 4–8 | 0–3 |
| | 15½ | 15½ |

## Sophomore Year

| | Units 1st Sem. | Units 2d Sem |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Additional Natural Science (if needed to meet requirement) | 0–3 | – |
| Economics 1A-1B, Principles | 3 | 3 |
| Political Science 1A-1B, Comparative Government, or 71A-71B, Introduction to American Government and Politics | 3 | 3 |
| Geography 1, Elements of Physical Geography | 3 | – |
| Elective | 0–6 | 9 |
| | 15½ | 15½ |

## Junior Year

| | Units 1st Sem. | Units 2d Sem |
|---|---|---|
| Economics 195, International Economic Relations | – | 3 |
| Political Science 150A-150B, International Relations | 3 | 3 |
| History 173A-173B, The Expansion of the United States | 3 | 3 |
| Spanish 104A-104B, Spanish-American Literature | 3 | 3 |
| Elective | 3 | 3 |
| Economics elective | 3 | – |
| Examination in U. S. Constitution (see page 21) | — | — |
| | 15 | 15 |

## Senior Year

| | Units 1st Sem. | Units 2d Sem |
|---|---|---|
| Economics 190, Principles of Foreign Trade | – | 3 |
| Economics 198, Investigation and Report (Western Hemisphere) | 3 | – |
| History 161, Mexico and the Caribbean Countries | 3 | – |
| History 162, South America Since Independence | – | 3 |
| Geography 116, Geography of Latin America | – | 3 |
| Geography 121, Geography of North America | 3 | – |
| Electives from economics, history, political science, or geography to complete the general major | 3 | 3 |
| Elective | 3 | 3 |
| | 15 | 15 |

# PRE-JOURNALISM CURRICULUM

Students desiring to emphasize journalism in working for the A.B. Degree at this llege should work toward a general major with journalism included as one of the ree major fields of study. (Refer to page 20 for explanation of the general major.)

The curriculum suggested below takes cognizance of the widely held contention at a candidate for a position in the newspaper, magazine, or publishing field should more than a product of vocational training. A competent journalist must bring to his rk a broad educational background, with particular emphasis on the social sciences.

Students interested in specialized journalism (such as a foreign correspondence, entific, financial, or political reporting) should attempt to fit specialized courses into eir curricula. Additional social science courses are recommended as electives.

Students preparing for degrees in journalism from other colleges should ascertain trance requirements of the college to which they expect to transfer, and should mold eir programs accordingly.

The following curriculum is suggested for students who have not decided upon y field of specialization within journalism:

## Lower Division

| | *Units* | |
|---|---|---|
| *eshman Year* | *1st Sem.* | *2d Sem.* |
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | 2 | - |
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 3 | 3 |
| Psychology 1, General; and 10, Advanced General, or 11, Applied | 3 | 3 |
| History 4A-4B, Modern Europe, or 8A-8B, The Americas, or 17A-17B, American Civilization (this course, if elected, must be taken in the sophomore year) | 3 | 3 |
| Natural Science (see page 18) | 3 | 3 |
| Elective | - | 3 |
| | 14½ | 15½ |
| *phomore Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Journalism 51A-51B, News Gathering and Reporting | 3 | 3 |
| Foreign Language (if not completed in high school) | 5 | 5 |
| Natural Science (see page 18) | 3 | 3 |
| Economics 1A-1B, Principles; or Sociology 50A-50B, Introduction and General | 3 | 3 |
| Library Science 10, Use of the Library | - | 2 |
| | 14½ | 16½ |

## Upper Division

On acquiring upper division status, the student should confer with his adviser in nning courses to meet his specific and specialized needs and that meet the requireents for the A.B. Degree with a general major, including U. S. Constitution and nerican history graduation requirement.

# PRE-LEGAL CURRICULUM

*The entrance requirements of law colleges range from two years to three and fou years of pre-legal work. The lower division requirements of the liberal arts curricul should be met in full whether the curriculum extends over a period of two, three, o four years.*

The following curriculum meets the recommendations of standard American la colleges for a broad and liberal education. For the majority of pre-legal students general major (see page 20) with concentration in economics, political science, an history, or a major-minor combination in these fields, will constitute the most effectiv preparation for later professional study in law and for later activities in the fiel of business.

## Lower Division

| | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem* |
| *Freshman Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | – | 2 |
| Foreign Languages (if needed to complete requirement) | 0–5 | 0–5 |
| Natural Science (see lower division requirements) | 3–6 | 3–6 |
| English 1, Freshman Composition, and English 2, Freshman Literature, or optional course | 3 | 3 |
| Commerce 14A-14B, Principles of Accounting | 3 | 3 |
| Psychology 1, General | 3 | 0–4 |
| Elective | | |
| | 15½ | 15½ |
| *Sophomore Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Additional Natural Science (if needed to meet requirement) | 3 | – |
| Economics 1A-1B, Principles of Economics | 3 | 3 |
| Philosophy 1A-1B, Introduction, or 3A-3B, History of Thought | 3 | 3 |
| Political Science 1A-1B, Comparative Government or 71A-71B, Introduction to American Government and Politics | 3 | 3 |
| Electives | 3 | 6 |
| | 15½ | 15½ |

## Upper Division

In the junior and senior years, the student should select his concentration according to the general field of legal practice in which he will be working, with the counsel of his adviser and the departments most concerned. For example, a student expecting to work in the foreign service or international field on an administrative level would probably have his major concentration in international law. Students going into federal employment on an administrative level would need appropriate political science courses. A student expecting to become a lawyer working in the field of criminal law would include pertinent sociology courses (105, 106) in his program. For the broad field of general legal practice and its relations with the field of business, the economics area will constitute the concentration. Since this latter area is by far the larger, more students will be interested in the suggested curriculum given below. It is flexible, to be varied according to the aims of the student with the counsel of his advisers and members of the departments in which he wishes to concentrate.

| | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| ***unior Year*** | | |
| Economics 133, Corporation Finance | – | 3 |
| Economics 150, Labor Problems | 3 | – |
| Economics Elective | – | 3 |
| History 151A-151B, History of England, or 172A-172B, Constitutional History of the United States | 3 | 3 |
| Political Science 111A-111B, Theory of the State, or 140 Principles of Public Administration, and 141, Organization and Procedure in Public Administration | 3 | 3 |
| Sociology 105, Social Pathology, and 106, Criminology and Penology | 3 | 3 |
| Electives (see upper division requirements) | 3–6 | 3–6 |
| Examination in U. S. Constitution, American history, institutions, and ideals (see page 20) | | |
| | 15 | 15 |
| ***enior Year*** | | |
| Economics 100A, Modern Economic Thought | 3 | – |
| Economics 170, Government and Business | 3 | – |
| Economics Elective | – | 3 |
| History 111A-111B, Ancient History, or 121A-121B, Medieval History | 3 | 3 |
| Political Science 153, Principles of International Law, and 154, International Law and the Courts | 3 | 3 |
| Electives | 3 | 6 |
| | 15 | 15 |

# LIFE SCIENCE VOCATIONAL CURRICULA

Students planning to enter any of the terminal curricula listed below shou include in their high school program the following subjects: elementary algebı 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or Germa 3 units.

## Lower Division

| | Units<br>1st Sem. | <br>2d Se |
|---|---|---|
| *Freshman Year* | | |
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 3 | 3 |
| Chemistry 1A-1B, General | 5 | 5 |
| Zoology 1A-1B, General | 4 | 4 |
| Social Science (see page 18) | 3 | 3 |
| Physical Education (activity courses) | ½ | |
| | 15½ | 15 |
| *Sophomore Year* | | |
| Botany 2A-2B, General | 4 | 4 |
| Bacteriology 1, General | 4 | – |
| Psychology 1, General | – | 3 |
| Social Science (see page 18) | 3 | 3 |
| Speech Arts 2A, Fundamentals of Public Speaking | 3 | – |
| Physical Education (activity courses) | ½ | |
| Electives (complete lower division requirements. See page 17) | 2 | 6 |
| | 16½ | 16½ |

Preparation for U. S. Constitution and American History graduation requirement.

## Upper Division

Work in the upper division should be planned in consultation with the Chairma of the Division of Life Sciences. A terminal curriculum is offered leading to th following occupational fields: fish and game, and wild life. Courses may be selecte from those listed below.

### WILD LIFE, FISH AND GAME

General Entomology
Cold Blooded Vertebrates
Parasitology
General Physiology
Ecology
Taxonomy of Plants
Microtechnique

Mammalogy
Ornithology
Economic Biology
Organic Chemistry
Statistics
Public Administration

## PRE-MEDICAL CURRICULUM

The entrance requirements of medical colleges ordinarily range from three to four years of pre-medical work. The lower division requirements of the liberal arts curricula include the general requirements of standard medical colleges and should therefore be met in full whether the curriculum extends over a period of three or of four years. All plans for pre-medical work should include an arrangement of courses to meet the requirements of the medical college which the student expects to enter.

A student who is pursuing a four-year pre-medical curriculum should major in chemistry or zoology in his junior and senior years, and must meet all upper division requirements for the A.B. Degree in the liberal arts curricula.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units. Two units of Latin are recommended.

### Lower Division

| | *Units*<br>*1st Sem.* | <br>*2d Sem.* |
|---|---|---|
| *Freshman Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Chemistry 1A-1B, General | 5 | 5 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| French or German (if needed to meet requirement) | 0–5 | 0–5 |
| Elective | 0–5 | 0–5 |
| | 15½ | 16½ |
| *Sophomore Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Zoology 1A-1B, General | 4 | 4 |
| Psychology 1, General | 3 | – |
| Chemistry 101, Elementary Organic, and 102, Organic Chemistry Laboratory | 4 | 3 |
| Social Science | 3 | 3 |
| Elective | 2 | 6 |
| | 16½ | 16½ |

### Upper Division

| | 1st Sem. | 2d Sem. |
|---|---|---|
| *Junior Year* | | |
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Physical Measurements | 1 | 1 |
| Chemistry 5, Quantitative Analysis | 3 | – |
| Zoology 100, Embryology | – | 4 |
| Zoology 106, Comparative Anatomy of the Vertebrates | 4 | – |
| Electives | 4 | 7 |
| Examination in U. S. Constitution, American history, institutions, and ideals (see page 21) | | |
| | 15 | 15 |
| *Senior Year* | | |
| Upper division requirements and electives for the major in Chemistry or Zoology, the minor and the degree (see page 17) | 15 | 15 |
| | 15 | 15 |

# PRE-NURSING CURRICULUM

A student who plans to complete a curriculum in nursing leading to a degree an a certificate in nursing in another collegiate institution should ascertain the low division requirements of that institution.

The high school program should include the following subjects: elementa algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; Frenc or German, 3 units; domestic science (foods), 1 unit; 2 units of Latin are re ommended.

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | – | 2 |
| Biology A, Mathematics of Solutions and Dosage | 2 | – |
| Chemistry 2A-2B, Fundamentals | 3 | 3 |
| Home Arts 61A, Nutrition, and 61B, Nutrition Laboratory | – | 3 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| French or German (if needed to complete requirements) | 0–5 | 0–5 |
| Elective | 3–8 | 0–5 |
| | 16½ | 16½ |

| **Sophomore Year** | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Psychology 1, General, and 11, Applied | 3 | 3 |
| Economics 1A-1B, Principles, or Sociology 50A, Introduction, and 50B, General | 3 | 3 |
| Bacteriology 1, General | 4 | – |
| Physiology 1A, Human Physiology, and 1C, Laboratory | – | 5 |
| Zoology 8, Human Anatomy | 3 | – |
| Elective | 3 | 5 |
| | 16½ | 16½ |

## PRE-OPTOMETRY CURRICULUM

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonometry, ½ unit; physics, 1 unit; chemistry, 1 unit; foreign language, 3 units.

The following curriculum prepares for junior standing in university schools of optometry. Student should consult the catalogue of the school to which he expects to transfer.

| Freshman Year | Units<br>1st Sem. | <br>2d Sem. |
|---|---|---|
| Chemistry 1A-1B, General | 5 | 5 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Speech Arts 2A, Fundamentals of Public Speaking | – | 3 |
| Foreign Language (if needed to complete requirement) | 5 | 5 |
| Physical Education (activity courses) | ½ | ½ |
| Electives (social science or other lower division requirement. See page 17) | 3 | 3 |
| | 16½ | 16½ |

| Sophomore Year | | |
|---|---|---|
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Physical Measurements | 1 | 1 |
| Psychology 1, General | – | 3 |
| Mathematics 3A, Plane Analytic Geometry | 3 | – |
| Social Science (complete requirement) | 3 | 3 |
| Physiology 1A, Human Physiology | – | 3 |
| Physiology 1C, Human Physiology (Laboratory) | – | 2 |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Chemistry 101, Elementary Organic | 3 | – |
| Physical Education (activity courses) | ½ | ½ |
| | 15½ | 15½ |

## PRE-PHARMACY CURRICULUM

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; chemistry, 1 unit; physics, 1 unit; foreign language, 2 units.

The American Association of Colleges of Pharmacy allows not more than one year of credit for work completed in an institution other than a college of pharmacy. Generally the first year work and part of that of the second year may be completed before transfer, the time required in the college of pharmacy cannot be reduced to less than three academic years. Students should ascertain the requirements of the college of pharmacy they expect to enter.

| Freshman Year | Units<br>1st Sem. | <br>2d Sem. |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Chemistry 1A-1B, General | 5 | 5 |
| Botany 2A-2B, General, or Zoology, 1A-1B, General | 4 | 4 |
| Mathematics C, Intermediate Algebra, and D, Trigonometry (if not completed in high school) | 3–0 | 3–0 |
| Physics 2A-2B, General, and 3A-3B, Physical Measurements | 4 | 4 |
| | 16½ | 16½ |

The following courses are also commonly required or recommended: (See, however, three-year rule, above.) Chemistry 5, Quantitative Analysis, 101, Elementary Organic, 102, Organic Chemistry Laboratory; Psychology 1, General; Physiology 1A, Human Physiology, or Zoology 20, Human Anatomy and Physiology.

# RECREATION CURRICULUM

The curriculum in recreation is arranged under the plan of the general majo to provide a program to train for playground work, camp leadership, work with youtl groups, and related activities. See page 20 for general major.

## Lower Division

| | | Unit |
|---|---|---|
| Health Education 21, Principles of Healthful Living | | 2 |
| Physical Education | | 7½–8 |
| Activity courses: 3 for men; 6 for women, selected from the following: 2A, 3A-3B, 4, 5, 6, 9, 11A, 13, 14. | | |
| Physical Education 44, Professional Activities (men) | 2 | |
| Physical Education 51, First Aid | 2 | |
| Physical Education 53, Physical Education for Elementary Schools | 2½ | |
| Social Science (to include Sociology 50A, Introduction, and 50B, General). (See page 18) | | 12 |
| Psychology 1, General, and 11, Applied | | 6 |
| Foreign Language (if 3 years not completed in high school) | | 10 |
| Natural Science (Physical Science 1A, Introduction, or Astronomy 1, Descriptive) and additional units selected from Biology 1, Survey, 10A-10B, General, Botany 4, California Plants, Geology 2A, General. (Include laboratory science if needed) | | 12 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | | 6 |
| Speech Arts 2A, Fundamentals of Public Speaking | | 3 |
| Elective | | 1–1½ |
| Prepare for U. S. Constitution and American History graduation requirement. | | |
| | | 60 |

## Upper Division

| | | |
|---|---|---|
| General Major (see page 20) | | 36 |
| Sociology (minimum of 9 units; maximum of 15 units) | | |
| Sociology 106, Criminology and Penology | 3 | |
| *Sociology 107, Juvenile Delinquency | 3 | |
| Sociology 109, Fields of Social Work | 3 | |
| *Sociology 110, Race Relations | 3 | |
| *Sociology 195, Community Welfare Organization | 3 | |
| Sociology 197, Urban Sociology | 3 | |
| Physical Education (minimum of 9 units; maximum of 15 units) | | |
| Physical Education 145, Professional Activities (men) or 156A-156B (women) | 2 | |
| Physical Education 146, Professional Activities (men) or 161 (women) | 2 | |
| *Physical Education 165, Community Recreation | 3 | |
| *Physical Education 170, Recreational Leadership | 3 | |
| *Physical Education 199, Special Study in Recreation | 3 | |
| Select a third field for the general major from the following: speech arts, psychology, art, music, education, biological science (minimum of 9 units; maximum of 15 units) | | |
| Education 174, Audio-visual Education | | 2 |
| Electives (including at least 2 units of upper division) | | 22 |
| | | 120 |

Consultation with an adviser in the Department of Physical Education is advised in selecting courses and fields of study for the general major.

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* These courses are required.

## PRE-SOCIAL WORK CURRICULUM

The professional curriculum in social service prepares for admission to graduate work in recognized American schools of social work. This curriculum should be pursued by those who plan careers in federal, state and local welfare work; social work in public schools including preparation for a teaching credential; family and children's private case work agencies; social settlement work; county probation work; child welfare agencies; statistical and investigational work in private and public agencies; work in public institutions for the defective and delinquent; medical social service and psychiatric social work in hospitals and clinics; executive positions in social work; and social work in numerous other organizations.

The lower division requirements of the liberal arts curricula include the general requirements of recognized professional schools of social work and should therefore ordinarily be met in full. The outline of courses below meets the requirements for the general major. See page 20.

The following subjects should be completed in high school: elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language, 3 units in one language.

| Lower Division | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| *Freshman Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | – | 2 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Biology 10A-10B, General | 3 | 3 |
| Foreign Language (if needed to complete requirement) | 0–5 | 0–5 |
| Psychology 1, General, and 11, Applied | 3 | 3 |
| Electives (see natural science requirement, page 18)<br>(Also recommended: Speech Arts 2A-2B, Public Speaking) | 1–6 | 1–4 |
| | 15½ | 15½ |
| *Sophomore Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Economics 1A-1B, Principles | 3 | 3 |
| Political Science 1A-1B, Comparative Government, or 71A-71B, Introduction to American Government and Politics | 3 | 3 |
| Additional Natural Science (if needed to meet requirement) | 3 | – |
| Sociology 50A-50B, Introduction and General | 3 | 3 |
| Electives (anthropology recommended) | 3 | 6 |
| | 15½ | 15½ |
| **Upper Division** | | |
| *Junior Year* | | |
| Economics 100B, Modern Economic Thought, or 111, Economic History of the United States | – | 3 |
| Sociology 103, Introduction to Social Research | 3 | – |
| Sociology 109, Fields of Social Work | – | 3 |
| Psychology 150, Abnormal Psychology | 3 | – |
| Psychology 145, Social Psychology | – | 3 |
| Zoology 165, Human Heredity | 2 | – |
| Elective | 7 | 6 |
| Examination in U. S. Constitution and American History. | | |
| | 15½ | 15½ |
| *Senior Year* | | |
| Economics 185, Social Insurance, or 150, Labor Problems | 3 | – |
| Sociology 197, Urban Sociology | 3 | – |
| Sociology Elective | – | 3 |
| Psychology 151A, Clinical (Diagnostic) | 3 | – |
| Economics Upper Division Elective | – | 3 |
| Political Science 140, Principles of Public Administration, and 141, Organization and Procedure in Public Administration, or upper division anthropology | 3 | 3 |
| Additional upper division electives in Economics or Psychology | 3 | 6 |
| | 15 | 15 |

# PRE-VETERINARY CURRICULUM

Most colleges of veterinary medicine require but one year (32 units) of pre veterinary college work. There are a few colleges which require two years and it i best to consult the bulletin of the college to which admission is desired for specia requirements.

## Freshman Year

| | Units 1st Sem. | Units 2d Sem |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Chemistry 1A-1B, General | 5 | 5 |
| Zoology 1A-1B, General | 4 | 4 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Electives | 2 | 4 |
| | 16½ | 16½ |

## Sophomore Year

| | Units 1st Sem. | Units 2d Sem |
|---|---|---|
| Botany 2A-2B, General | 4 | 4 |
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Physical Measurements | 1 | 1 |
| Chemistry 101, Elementary Organic | 4 | – |
| Psychology 1, General | – | 3 |
| Social Science | 3 | 3 |
| Physical Education (activity courses) | ½ | ½ |
| Electives | 1 | 2 |
| | 16½ | 16½ |

Suggested electives are additional Mathematics, Foreign Language, Entomology.

# ANNOUNCEMENT OF COURSES

## COURSE NUMBERS

Courses numbered from 1 to 99 are lower division (freshman or sophomore) ourses; those numbered 100 to 199 are upper division (junior or senior) courses; hose numbered 200 to 299 are graduate courses (see page 12 for information conerning eligibility to enroll in these courses); those numbered 300 to 399 are profesional education courses to be taken at the graduate level.

## CREDIT FOR UPPER DIVISION COURSES

Freshmen are not admitted to upper division courses.

A sophomore may enroll in an upper division course for lower division credit rovided he has earned an average grade of not less than 1.5 in all college work ndertaken, and provided he receives the instructor's permission to enroll in the course.

A second semester sophomore may enroll in an upper division course for upper ivision credit without the foregoing grade limitations provided the units earned in he upper division course or courses are in excess of the 60 units required in the ower division.

A student with sophomore standing may carry upper division courses for upper ivision credit provided that he has the written approval of the chairman of the departent and the Dean of General Education or the Dean of Professional Education.

## UNITS

Figures in parentheses indicate the unit value of the course.

One "unit" represents 50 minutes of recitation or lecture, together with the equired preparation, or three hours laboratory work each week for a semester of 8 weeks.

## ORDER IN WHICH COURSES ARE OFFERED

The semester in which courses are offered is designated as follows: Fall (given n Fall only); Spring (given in Spring only); Fall or Spring (given in either Fall r Spring); Fall and Spring (a year course beginning in either the Fall or Spring); ear Course (beginning in Fall).

Either semester of a year course may be taken first unless otherwise designated.

Although the college fully expects to carry out the arrangements planned in the ist of courses, it reserves the right to make changes. Classes in which the enrollment oes not come up to the minimum number set by the State Department of Education ay not be offered or may be postponed.

## PREREQUISITES

Prerequisites for courses are stated. A student should not enroll in a course for hich he is not eligible.

## PROVISIONAL COURSES

Courses numbered 40 to 45 are open only to students who are in the provisional rogram. Other students (those not having provisional status) are not eligible to ake these courses.

# AESTHETICS

## IN THE DIVISION OF FINE ARTS

### Major

A *liberal arts major* is not offered in aesthetics; however, certain courses in thi field are required as part of the liberal arts major in art and in music. For specifi information, refer to these departments.

A *teaching major* is not offered in aesthetics; however, certain courses in thi field are required as part of the teaching major in art and in music for the genera secondary and the special secondary credentials in these fields. For specific information refer to the outlines of requirements for these credentials.

### Minor

A *liberal arts minor* is not offered in aesthetics.

A *teaching minor* is not offered in aesthetics; however, certain courses in this field are required as part of the teaching minor in art for the general secondary, the general junior high school, and the special secondary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. Survey of Music**

Correlation of music and other arts. Designed to stimulate enjoyment of music by developing intelligent listening. The elements of music, its structure, folk music of all countries, musical instruments, and the contributions of the best known composers, with some biographical study of these men. Compositions are presented by orthophonic recording and by class members. Attendance at a number of local concerts is required. No previous musical training or background is necessary. Music majors are required to complete additional assignments for full credit.

Year course (2-2)

**5. Art Orientation**

An illustrated lecture course dealing with aesthetic meaning and its relation to the structure of art products. Designed to increase both understanding and appreciation of the visual world in general and of the fine arts in particular.

Spring (2)

**50. Appreciation and History of Art**

A survey of art development in the painting, sculpture, architecture, and handicrafts from dawn of art to the Renaissance. Illustrated.

Fall (2)

**51. Survey of Mexican Art**

A study of Mexican and Middle American Art from earliest time to present.

Fall (2)

**52A-52B. Survey of Oriental Art**

A study of the art of the great cultures of the Orient. (52A is a prerequisite for 52B.)

Fall and Spring (3-3)

### Upper Division Courses

**100. Great Music**

A listening course designed especially for the layman and concert-goer. Masterpieces of instrumental and vocal music will be performed by means of recordings and by local musicians. A study of artistic trends and their effect upon musical composition and performance. Correlation of musical art and other arts. No prerequisites. No credit for music majors.

Summer (3)

**2A-102B. Music History**

The various movements in the development of music as related to the other arts. he chronological development of the art of music with particular emphasis on the rger works. Considerable attention is given to the works of modern composers. Many mphonic works are studied from the orchestral scores. Music majors are required to mplete additional assignments for full credit. Prerequisite: Aesthetics 1A or 1B.
Year course (2-2)

**0. Appreciation and History of Art**

The period from the Renaissance through the modern school treated in the same anner as in Aesthetics 50.
Spring (2)

# ANTHROPOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *liberal arts major* is not offered in anthropology. Students wishing to use thropology as a field of concentration in the *general major* should include the lowing courses in the lower division: Anthropology 1A-1B, 2 or 3; Geography 1, 2; ology 1A-1B; Psychology 1, 10 or 11; Sociology 50A-50B; recommended: Spanish, rman, or French. Recommended fields of concentration in addition to anthropology the upper division of the general major with a view to later specialization in one of following areas of anthropological work: *area of archaeology:* art, geography, ology, history; *area of physical anthropology:* psychology and zoology; *area of seum work:* art, education, geology, psychology. For further information on the neral major, refer to page 20.

A *teaching major* is not offered in anthropology; however, it may be used as rt of the *social science major* for the general junior high school credential or the neral secondary credential. For specific information, refer to the outlines of the quirements for these credentials.

### Minor

A *liberal arts minor* is offered in anthropology. The minor must include at least units of work in anthropology, 9 units of which must be from courses carrying per division credit.

A *teaching minor* is not offered in anthropology for the general secondary cre-ntial; however, anthropology may be used as a part of the *social science minor* for general junior high school, the special secondary, the general elementary, and the dergarten-primary credentials. For specific information, refer to the requirements the teaching minor for these credentials.

**-1B. General Anthropology**

Origin and antiquity of man. Theories of human descent. Classification of races. gin and early development of civilization.
Year course (3-3)

**Physical Anthropology**

An introduction to the studies of primatology and anthropometry. The compara- anatomy of the monkeys and great apes, the emergence of the anthropoids, the nstruction of early man from fossil evidence. The landmarks, measures and indices d in the metrical study of the living human body and skeletal material. Sexual differ- es and growth changes in the skull and skeleton.
Fall (3)

**Survey of Archaeology**

A review of the history of modern archeology and a discussion of its methods. The elopment of archaeological techniques in reconstructing the ancient cultures of the literranean world. The problems of present day archaeology in the Near East, the ent and the Americas. The principles and basic techniques used in the excavation of s and the reporting of findings.
Spring (3)

### 54. Social Anthropology

An anthropological study of social institutions in primitive and civilized societi The evolution of family organization, religion, property right, and government traced elementary and advanced civilization.

Spring (3) (Not offered in 1948-49)

## Upper Division Courses

### 151A. The North American Indian

Pre-Columbian cultures of the North American Indian. The origin and migrati of New World peoples. Industries, arts, crafts, social organization, religion and oth phases of American Indian civilization.

Fall (3)

### 151B. Indian Civilization of Middle America

The development of civilization in Pre-Columbian Mexico and Central Americ Aztec, Mayan, and related cultures.

Spring (3)

### 152. World Ethnography

The cultural patterns of representative aboriginal peoples. Industries, arts, soci organization and supernaturalism considered with a view to environmental adjustme historical development and functional interrelation. Ethnological theories reviewed a applied in interpreting illustrative aboriginal societies.

Fall (3) (Not offered in 1948-49)

### 153. Primitive Religion

Beliefs and ritual of primitive man. Magic and religion. Forms of animism a polytheism. Primitive mentality and the supernatural.

Spring (3) (Not offered in 1948-49)

### 161. The California Indian

A survey of native California Indian culture with stress on the Indian groups Southern California. The industries, arts, social organization, folklore and religi will be considered as revealed through the study of living peoples and archaeologic evidences.

Offered only during summer sessions (3)

### 165. Ethnology and Race Psychology

The biological basis of race, somatic and serologic typology, racial mentality, tes and their ethnopsychological significance, abnormality in ethnic groups. Race and cu ture; ethnic aspects of demography.

Fall (3) (Not offered in 1948-49)

### 172. Indian Cultures of the Southwest

Pueblo Indian culture of the Southwestern states and its background in the art crafts, architecture and religion of the past. The culture of contemporary Pueblo villages interpreted in terms of earlier civilizations revealed through archaeolog Recent trends in archaeological research reviewed.

Offered only during summer sessions (3)

# ART

## IN THE DIVISION OF FINE ARTS

### Major

A *liberal arts major* is offered in art. Every student who plans to major in art,
hether under the liberal arts program or the teacher training program, should com-
te the following basic courses: Aesthetics 5 or 51, and 50, Art A-B, 6A-6B, and 14A.
nder the liberal arts program the student majoring in art may choose either a group
courses in which the crafts are emphasized or a group of courses in which the graphic
ts are emphasized. One of the following plans should be selected:

Emphasis on crafts: The student should add to the list of basic courses required
all art majors the following courses: lower division: Art 6D, 7, 11A-11B, and 61B;
per division: Aesthetics 150, Art 106A or B or C, 106D, 117A-117B, 119A-119B, and
nits of art electives. This program points in the direction of industrial design, inte-
r design, cabinet making, sculpture, weaving, textile design, ceramics, etc.

Emphasis on graphic arts: The student should add to the list of basic courses
quired of all art majors the following courses: lower division: Art 15A, 16A, and 4
its of art electives; upper division: Aesthetics 150, Art 106A, 112A-112B, 115A-
5B, 116A-116B, 117A, and 6 units of art electives. This program points in the direc-
n of illustration, portraiture, landscape painting, mural design, poster design, pro-
ction illustration, advertising design, fashion design, etc.

A *teaching major* in art is offered for the general secondary credential and the spe-
l secondary credential. Students planning to teach art in the secondary schools should
d to the list of basic courses required of all art majors the following courses: lower
ision: Art 61A-61B, and 6 units of art electives; upper division: Aesthetics 150,
t 116A, 112A, 106A, 119A, 195, and 6 units of art electives. Speech Arts 140A should
o be completed. For further information, refer to the outlines of requirements for the
ecial secondary and general secondary credentials.

### Minor

A *liberal arts minor* is offered in art. The minor must include at least 15 units of
rk in art, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in art for the general secondary, the general junior
h school, and the special secondary credentials. Art may be offered only as a second
ching minor for the general elementary and the kindergarten-primary credentials.
r specific information, refer to the outlines of requirements for these credentials.

### Art Appreciation, History and Orientation

For courses in appreciation, history of art, and art orientation, see aesthetics.
ny students, regardless of the field in which they may be majoring, recognize the
ed for an intelligent approach to the subject of art and art appreciation. However,
e to the erroneous popular feeling that art is a subject requiring "talent", these stu-
nts may refrain from enrolling in art courses. For students who desire a better under-
nding of art, but who do not hope to acquire any of the art skills, the following
rses are recommended:

| | *Units* |
|---|---|
| Aesthetics 5, Art Orientation | 2 |
| Aesthetics 50, History and Appreciation of Art | 2 |
| Aesthetics 51, Survey of Mexican Art | 2 |
| Aesthetics 52A-52B, Survey of Oriental Art | 6 |
| Art 8, Costume and Home-furnishing | 2 |

Other courses which require certain skills but which are not beyond the ability
the average college student are:

| | |
|---|---|
| Art 61B, Crafts | 2 |
| Art 6A, Design | 2 |
| Art A, Drawing and Composition | 2 |
| Art 94, Costume design | 2 |

## Lower Division Courses

### A. Drawing and Composition

Problems involving perspective to develop ability to draw still life, furnitu exteriors, interiors, and the like. (High school equivalent may excuse the student fr this course.)
Fall or Spring (2)

### Art B. Drawing and Composition

Drawing of mechanical and natural forms by the use of line and value. Empha on proportion and structure. Some quick sketching, gesture and contour drawing. P requisite: Art A.
Fall or Spring (2)

### 6A. Design

Fundamentals of design and composition and theory of color. Basic course used a prerequisite for all advanced work.
Fall or Spring (2)

### 6B. Design

Original work in creative design and representation with special stress on mod tendencies. Prerequisite: Art 6A.
Fall or Spring (2)

### 6D. Design

Study of the principles of design through the making of furniture. Prereq site: 6A.
Fall or Spring (2)

### 7. Line, Color and Display

The principles of line, color and arrangement applied to store and window d play. Study and observation of windows, color and materials used in display. Build models and practical problems in arranging colors, textures, and forms in windo to fit different kinds of merchandise.
Fall or Spring (2)

### 8. Costume and House Furnishings

An appreciative study of modern architecture and modern house furnishin with emphasis on the spirit of gracious living and an appreciative study of the mod dress with emphasis on suitability to the figure, the personality and the occasion.
Fall or Spring (2)

### 11A. Industrial Design

Design of objects for manufacture with reference to their use, materials, a in accordance with factory practices and machine techniques. Prerequisite: Art 6 6B, A.
Fall (2)

### 11B. Advanced Industrial Design

Advanced problems with particular attention to the techniques of presentation working drawings, renderings in perspective and scale models. Prerequisite: Art 6 6B, A, 11A.
Spring (2)

### 14A. Lettering

Fundamental art principles applied to lettering. Practice for quick, accur lettering; original problems using letters as design. Prerequisite: Art 6A.
Fall (2)

### 14B. Posters and Commercial Art

The application of lettering to posters, newspaper and magazine advertisin and other forms of commercial art. The study of composition combined with lett ing and special study of modern tendencies in publicity. Prerequisites: Art 6A, 14
Spring (2)

### A-15B. Life Drawing

Drawing from the nude model. Prerequisite: Art A-B.
Fall and Spring (2-2)

### A-16B. Painting

Semester I: Composition of still life in oil. Semester II: Landscape and more vanced composition in oil. Prerequisite: Art A-B.
Fall and Spring (2-2)

### A-17B. Sculpture

Creative design in such materials as clay, wood, stone, concrete, etc. Prerequi- es: Art 6A-6B.
Fall and Spring (2-2)

### A. Crafts in the Elementary Schools

A foundation course which develops unification of work of the elementary grades rough activities and experiences. These experiences grow out of environmental tivities. They include study and working of clay, lumber and tools, textiles, and rdboard construction. Prerequisite: Art 6A.
Fall or Spring (2)

### B. Crafts

Problems involving the application of design principles to various fields—pottery, tiles, weaving, metal work, wood-carving, and book-binding. Prerequisite: Art 6A.
Fall or Spring (2)

### A-94B. Costume Design

Original designs of modern costumes suitable to the individual or to distinct es; the drawing of fashion figures; the rendering of fabrics and textures. Prerequi- se: Art 6A.
Fall and Spring (2-2)

### A-95B. Interior Decoration (See Art 195A-195B)

## Upper Division Courses

### A-106B. Printmaking

Study of print crafts which includes the making of linoleum blocks, wood engrav- s, etchings and lithographs. Prerequisites: Art A, B, 6A.
Fall and Spring (2-2)

### C. Illustration

Same as 106A-B except that printmaking is applied to problems of book illus- tion. Prerequisites: Art A, B, 6A.
Spring (2)

### D. Advanced Furniture Design

(See Art 6D) Prerequisite: Art 6D.
Fall or Spring (2)

### A-112B. Design and Composition

Imaginative organization of space by means of color, dark and light, perspective, textures of various materials. Prerequisites: Art A-B, 6A-6B.
Year course (2-2)

### A-115B. Life Drawing and Painting

Drawing and painting from nude and costume models. Prerequisite: Art A-B.
Fall and Spring (2-2)

### C-115D. Advanced Life Drawing and Painting

Painting from nude and costume models and advanced composition in oil. Por- ture. Prerequisite: Art 115A-115B.
Fall and Spring (2-2)

**116A-116B. Advanced Painting**

Painting in oils from still life and landscape, stressing composition. Prerequ Art 16A or 16B.
Fall and Spring (2-2)

**117A-117B. Sculpture**

Creative design in such materials as clay, wood, stone, concrete, etc. Prer sites: Art 6A-6B and 17A or 17B.
Fall and Spring (2-2)

**119A. Ceramics**

Building of pottery on the basic techniques of coil, slab, mold making, an casting. Ceramic sculpture, glazing and kiln operations. Prerequisite: Art 6A.
Fall (2)

**119B. Ceramics**

Study of glazes and elementary clay technology. Mold making, slip casting application to individual creative problems. Prerequisite: Art 119A.
Spring (2)

**166. Special Studies**

A student with the necessary grade point average may apply for work i upper division art course and register for Art 166, Special Studies. (See page

**194A-194B. Costume Design** (For description, see Art 94A-94B)

Prerequisite: Art 6A and consent of instructor.
Fall and Spring (2-2)

**195A-195B. Interior Design**

The consideration of the house as a unit; the arrangement of garden, h floor plan, and furniture as functional and decorative problems. Prerequisite: A and 6A. 195A is a prerequisite for 195B.
Fall and Spring (2-2)

## Graduate Courses

**200A-200B. Special Problems**

A graduate course in which students may carry out projects in various fiel art under the direction of faculty members who are specialists in the field ch Students registering for this course must apply for work within a certain field discussions with the art faculty. Prerequisite: Graduate standing and conse instructor.
Fall and Spring (2-2)

# ASTRONOMY

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *liberal arts major* is not offered in astronomy. Students desiring to prepare for lvanced work in astronomy should include the following courses: Astronomy 1, 2, 9, and 10; Mathematics 3A-3B, 4A-4B; Physics 1A-1B-1C-1D; a reading knowledge French and German.

A *teaching major* is not offered in astronomy; however, astronomy may be used part of the general science major for the general junior high school credential. For ecific information, refer to the outline of requirements for the general science teach- g major for this credential.

### Minor

A *liberal arts minor* is not offered in astronomy.

A *teaching minor* is not offered in astronomy; however, astronomy may be used part of the *general science minor* for the general junior high school, the special condary, the general elementary, and the kindergarten-primary credentials. For ecific information, refer to the requirements of the teaching minor for these edentials.

### Lower Division Courses

**Descriptive Astronomy**

A cultural course planned to develop an appreciation of astronomy with special nphasis on the solar system. Only calculations of an elementary nature are used. pecial attention is given to the methods and instruments by means of which astro- mical knowledge has been gained. A six-inch John Byrne refractor and an eight-inch flecting telescope are available for observation. Prerequisites: Elementary algebra d plane geometry.

Fall and Spring (3)

**Modern Astronomy**

A study of the stellar system in the light of modern research, especially photo- aphic and spectrographic. Prerequisite: Astronomy 1 or permission of the instructor.

Spring (3)

**Surveyor's Course in Practical Astronomy**

The principles of spherical astronomy adapted to the needs of engineering stu- nts. Computation and observation. Two lectures and one three hour laboratory period ch week. Prerequisite: Surveying 1A or permission of the instructor. Astronomy 1 d 9 desirable.

Spring (3)

**Practice in Observing**

A laboratory course designed particularly to go along with and to supplement tronomy 1. The course will include constellation study, use of astronomical coordi- tes, elementary methods of determining time and latitude, and descriptive observa- ns of celestial objects with the six-inch telescope. One three hour evening laboratory riod each week. Prerequisite: Astronomy 1 or registration in Astronomy 1 or permis- n of the instructor.

Fall or Spring (1)

**Advanced Observational Astronomy**

A continuation of Astronomy 9. More advanced problems in observing will be en up such as the determination of azimuth by observations of Polaris, astronomical otography, etc. One three hour evening laboratory period each week. Prerequisites: tronomy 1 and 9.

Spring (or upon demand) (1)

**Elementary Navigation**

A study of compass corrections, drift problems, time, line of position, use of estial coordinates, Bowditch Tables, etc. A few class hours at the close of the term are devoted to the use of tables such as Ageton, Dreisonstok and H. O. 214 for solution of astronomical triangle. One three hour laboratory period each we Offered if demand is sufficient. Prerequisite: Astronomy 1 or permission of instruct

Fall (3) (Offered in 1948-1949)

### Upper Division Courses

**100. Special Problems**

Admission by consent of instructor. Credit and hours to be arranged in each ca Open to students who have completed three units in astronomy.

Fall or Spring (1 or 2)

**105. Historic Development of Astronomy**

A study of the more important problems and astronomical concepts in the li of their historical development. Particular attention is given to the biography contributions of the more important astronomers, such as, Galileo, Kepler, Newt Herschel, Bessel, etc.

Spring (3)

**107. Method of Least Squares and Computing Practices**

Fundamental principles with applications in the fields of astronomy, phys and engineering.

Spring (3) (Not offered 1948-49)

## BACTERIOLOGY

### IN THE DIVISION OF LIFE SCIENCES

*Majors* and *Minors* are not offered in bacteriology; however, courses in this fi may be used as part of the liberal arts major in zoology. Courses in this field recommended for students who are preparing to teach science in junior high sch or life sciences in high school.

### Lower Division Courses

**1. General Bacteriology**

An introduction to bacteriology. Effects of physical and chemical agencies up bacteria; biochemical activities of bacteria; microscopic examination and cultivati of bacteria; the bacteria of air, water, soil, milk and dairy products, other foo industrial applications. Introduction to disease-producing bacteria. Two hours of lect and six hours of laboratory per week. Prerequisite: Chemistry 1A or 2A.

Fall or Spring (4)

### Upper Division Courses

**101. General Bacteriology**

Lectures and laboratory work of Bacteriology 1 with additional work to prescribed by the instructor. Prerequisite: Chemistry 1A or 2A.

Fall or Spring (4)

**199. Special Problems**

Work other than is outlined in the regular courses. Admission only by cons of the instructor with whom the work is to be done. Credit and hours to be arrang in each case. Open to students who have completed at least 15 units of work in life sciences (including courses in Bacteriology) with grades of A or B.

Fall or Spring (1 or 2)

# BIOLOGY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *liberal arts major* is not offered in biology; however, courses in biology may be used as part of the *liberal arts major in life science.* Refer to page ___ for outline of the life science major.

A *teaching major* is not offered in biology; however, Biology 10A-10B may be used for the year course required in a biological science for the *general science major* for the general junior high school credential or the *physical science major* for the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor* is not offered in biology; however, biology may be used as part of the *general science minor* for the general junior high school and special secondary credentials. For specific information, refer to the outlines of requirements for the teaching minor for these credentials.

### Lower Division Courses

**A. Solutions and Dosage**

Arithmetic review with computing of dosage, percentage of solutions, apothecaries weights. Two hours per week.
Fall (2)

**. Survey of Biology**

A survey of life science, stressing the development of modern concepts in the ields of plant and animal science, bacteriology, genetics, and physiology. Emphasis s placed on the relationships of biology to modern life and the application of scientific analysis to every day problems. Three lectures and one hour of demonstration and discussion per week. Not open to students with credit for Biology 10A-10B, Zoology A-1B, or Botany 2A-2B.
Fall or Spring (3)

**0A-10B. General Biology**

A year course in life science, more extensive than "Biology 1." Continues hroughout the year and includes a three-hour laboratory period, and two hours of lectures per week. Designed for those who do not expect to specialize in zoology or otany; not open to students with credit for Biology 1, 40, Zoology 1A, 1B, Botany A, or 2B. Biology 10A is a prerequisite for 10B. Students who have taken 10A-10B may elect Zoology 1B or Botany 2A or 2B for credit.
Year course (3-3)

# BOTANY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *liberal arts major* is not offered in botany; however, courses in this field m be used as part of the liberal arts major in zoology or as part of the *liberal arts maj in life science*. For specific information, refer to zoology and to page 21 for outline requirements for the life science liberal arts major.

Students who are preparing for advanced work in botany should include t following courses: Botany 2A-2B, 104; Chemistry 1A-1B, 101. Recommended: Frenc German, and elementary courses in other biological sciences.

A *teaching major* is not offered in botany; however, botany may be used as pa of the *general science major* for the general junior high school credential or as pa of the *life science major* for the general secondary credential. For specific informatio refer to the outlines of requirements for these credentials.

### Minor

A *liberal arts minor* is offered in botany. The minor must include at least 15 uni of work in botany, 9 units of which must be from courses carrying upper divisi credit.

A *teaching minor* is not offered in botany; however, botany may be used as pa of the *general science minor* for the general junior high, the special secondary, t general elementary, and the kindergarten-primary credentials or as part of the *li science minor* for the general secondary credential. For specific information, refer the outlines of requirements for these credentials.

### Lower Division Courses

**2A-2B. General Botany**

A year course covering the fundamentals of structure and general behavior seed plants, the morphology and relationship of the lower plants, including an intr duction to classification and distribution of seed plants. Two lectures and six hours laboratory work per week. Botany 2A is a prerequisite to 2B.

Year course (4-4)

**4. California Plants**

Classification and ecology of representative orders of wild flowers, trees, an chaparral of the San Diego region, including practice in the use of keys. One lectu and three hours laboratory per week. Occasional Saturday field trips.

Spring (2)

### Upper Division Courses

**101. Plant Pathology**

A practical course dealing with the principles of disease in plants, contr measures, and quarantine procedures. Of particular interest to students of agricultur forestry and horticulture. Emphasis is placed on the determination and control mea ures of those pathogenic organisms which affect truck and field crops, garden an ornamental trees and shrubs and nursery stock. Two lectures and one laborato period per week. Prerequisite: Botany 2A-2B.

Fall (3)

**102. Plant Geography**

Lectures and field work on the principles of geographical distribution of plant Prerequisite: Botany 2A-2B, or 4, or equivalent.

Fall (2) (Offered in 1948-49 and alternate years)

**104. Plant Taxonomy**

Identification, classification and distribution of representative orders of flowerin plants. One hour lecture and six hours per week of laboratory and field work. Pr requisites: Botany 2A-2B, or 4.

Spring (3) (Offered in 1947-48 and alternate years)

### 105. Cultivated Trees and Shrubs

Recognition of the common cultivated trees and shrubs of the San Diego region. Trips to local parks and private gardens. One lecture and three hours per week laboratory or field work.

Fall (2)

### 107. Plant Physiology

The activities of plants, including food manufacture, absorption, conduction, transpiration, respiration, growth and movement. Two lectures and two laboratory periods per week. Prerequisites: Biology 10A-10B or Botany 2A, and Chemistry 2A-2B or equivalent.

Spring (4)

### 123. Economic Biology

Study of the uses of plants and animals to man and the ways in which they njure him and his possessions. Consideration is also given to general methods of control and conservation. Prerequisite: Zoology 1A, Biology 1, or Biology 10B. Not open to students who have credit in Zoology 123.

### 124. Scientific Illustration

Drawing and photography of scientific subjects. Students are assigned individual projects, following their respective inclinations. It is desirable for students electing this course to have a definite project, or projects in mind and to confer with the instructor in advance in case specialized needs are required. Six hours of laboratory work per week. Not open to students who have credit in Zoology 124.

Fall (2)

### 130. Readings in Biology

Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles, ecology, economic zoology, zoogeography, breeding habits, and animal behavior. Not open to students who have credit in Zoology 130.

Spring (2)

### 55. Genetics

An introductory course to the principles of heredity and cytogenetics, including he genetics of man, other animals and plants. Designed primarily for science majors. Two lectures per week. Not open to students who have taken Zoology 155 or 165. Prerequisite: Biology 10A-10B, Zoology 1A-1B, or Botany 2A-2B.

Spring (2)

### 99. Special Problems

Work other than is outlined in the above courses. Admission by consent of the nstructor with whom the work is to be done. Credit and hours to be arranged in each case. Open only to students who have completed at least fifteen units of Botany with a grade A or B.

Fall and Spring (1 or 2)

# CHEMISTRY
## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *liberal arts major* is offered in chemistry. Two plans are provided: One fo students expecting to enter chemistry as professional chemists; the other for student intending to use chemistry in a related field. In addition, varying degrees of concen tration in chemistry are available in the teaching major in physical science and in th chemical engineering option of the general engineering major.

A *teaching major* is offered in chemistry for the general secondary credential o as part of the *general science major* for the general junior high school credential or a part of the *physical science major* for the general secondary credential. For specifi information, refer to the outlines of the requirements for these credentials.

### Minor

A *liberal arts minor* is offered in chemistry. The minor must include Chemistr 1A-1B plus at least 9 units of credit in upper division chemistry courses.

A *teaching minor* is offered in chemistry for the general secondary credential o as part of the *general science minor* for the general junior high, the special secondary the general elementary, and the kindergarten-primary credentials. For specific infor mation, refer to the outlines of the requirements for these credentials.

### Curricula for Liberal Arts Majors in Chemistry

Plan A, outlined below, is recommended for all students who intend to becom professional chemists. It follows the recommendations of the Committee on Professiona Training of the American Chemical Society. It qualifies graduates for many types o positions as chemists and provides the training required by most universities fo admission to graduate work in chemistry.

Plan B is designed for students who do not intend to become professiona chemists, but who desire the major in chemistry as part of a general education or i preparation for training in a related profession. By proper choice of electives, gradu ates can meet the requirements for admittance to medical schools. This plan is als suitable for students interested in teaching in secondary schools who desire mor intensive chemical training than that required in the physical science major.

The recommended sequence of courses for each plan is presented below. Al courses except electives are required. The foreign language requirement may be me by courses taken in high school plus an examination to demonstrate competence in reading. Some variation in sequence is permissible with the consent of the faculty adviser.

#### Plan A
#### (For chemists)

| First year | *Units* |
|---|---|
| Chemistry 1A-1B | 5–5 |
| Physics 1A-1B | 3–3 |
| Mathematics 3A-3B | 3–3 |
| English 1 and 2 | 3–3 |
| Health Education 21 | 0–2 |
| Physical Education | ½–½ |
| | 14½–16½ |

| Second year | *Units* |
|---|---|
| Chemistry 5 | 3–0 |
| Chemistry 101 | 0–4 |
| Physics 1C-1D | 3–3 |
| Mathematics 4A-4B | 3–3 |
| German A-B | 5–5 |
| Psychology 1 | 3–0 |
| Physical Education | ½–½ |
| | 17½–15½ |

#### Plan B
#### (For related professions)

| First year | *Units* |
|---|---|
| Chemistry 1A-1B | 5–5 |
| Physics 2A-2B | 3–3 |
| Physics 3A-3B | 1–1 |
| Mathematics 7A-7B | 3–3 |
| English 1 and 2 | 3–3 |
| Physical Education | ½–½ |
| | 15½–15½ |

| Second year | *Units* |
|---|---|
| Chemistry 5 | 3–0 |
| Chemistry 101 | 0–4 |
| French or German A-B | 5–5 |
| Health Education 21 | 2–0 |
| Psychology 1 | 0–3 |
| *Elective | 6–3 |
| Physical Education | ½–½ |
| | 16½–15½ |

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* Should include preparation for minor.

| Third year | *Units* |
|---|---|
| Chemistry 102-103 | 3–3 |
| Chemistry 110A-110B | 3–3 |
| Chemistry 105 | (3–0) or 0–3 |
| Minor | (0-3) or 3-0 |
| † Social Science | 6–6 |
| | 15–15 |

| Fourth year | *Units* |
|---|---|
| Chemistry 111 | 3–0 |
| Chemistry elective | 0–2 |
| Minor | 3–3 |
| Electives | 9–10 |
| | 15–15 |

| Third year | *Units* |
|---|---|
| Chemistry 102-103 | 3–3 |
| Chemistry 110A-110B | 3–3 |
| Chemistry 105 | (3–0) or 0–3 |
| Minor | (0-3) or 3-0 |
| † Social Science | 6–6 |
| | 15–15 |

| Fourth year | *Units* |
|---|---|
| Chemistry elective | 3–3 |
| Minor | 3–3 |
| Electives | 9–9 |
| | 15–15 |

## Lower Division Courses

### 1A-1B. General Chemistry

The general principles of chemistry, and a description of the elements and their common compounds. Three lectures and two laboratory periods per week. The laboratory work in the second semester consists of work in qualitative analysis. Prerequisites: Two years of high school mathematics. Recommended: High school chemistry, physics, and additional mathematics. Chemistry 1A is a prerequisite for Chemistry 1B. Only 2 units of credit per semester will be allowed to students who have credit for Chemistry 2A-2B.

Year course (5-5)

### 2A-2B. Fundamentals of Chemistry

A general course for those not intending to take advanced courses in chemistry. The work in the first semester stresses inorganic chemistry and fundamental principles; that of the second semester covers an introduction to organic chemistry and biochemistry. Emphasis is placed on applications of chemistry to everyday life. Two lectures and one laboratory period per week. Required of prenursing students and recommended for those desiring chemistry as part of a liberal education. Not open for credit to students who have credit in Chemistry 1A-1B.

Year course (3-3)

### 5. Elementary Quantitative Analysis

The principles of gravimetric and volumetric analysis. Discussions of the theory of quantitative analysis and practice in the standardization of reagents and the analysis of samples. One lecture and quiz, and two laboratory periods per week. Prerequisite: Chemistry 1A-1B.

Fall or Spring (3)

### 101. Elementary Organic Chemistry

An introductory study of the chemistry of carbon compounds, both aliphatic and aromatic. The laboratory work illustrates properties and reactions of typical compounds and stresses development of technique. Three lectures and one laboratory period per week. Prerequisite: Chemistry 1A-1B.

Fall or Spring (4)

### 102. Organic Chemistry Laboratory

Synthesis of typical aliphatic and aromatic compounds. Study of the theory and practice of laboratory distillation, crystallization and related operations. Approximately the last third of the work covers an introduction to the systematic qualitative analysis of organic compounds by group reactions and individual tests. Three laboratory periods per week. Prerequisite: Chemistry 101.

Fall or Spring (3)

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† To meet college requirement, see page 18.

**103. Intermediate Organic Chemistry**

A continuation of Chemistry 101. Further study of types of aliphatic and aromatic compounds, their derivatives and interrelationship. Introduction to mechanism of organic reactions. Three lectures per week. Prerequisite: Credit or registration i Chemistry 102.

Spring (3)

**105. Advanced Quantitative Analysis**

Advanced work in the theory and practice of volumetric, gravimetric, and electroanalysis. One lecture, one quiz, and two laboratory periods per week. Prerequisite Chemistry 5.

Fall or Spring (3)

**110A-110B. Physical Chemistry**

Theoretical principles of chemistry, with emphasis on mathematical relations The class will be divided into Sections A and B. Students with credit or registration i Mathematics 4B will be admitted to Section A; others to Section B. In Section B th mathematical treatment of some topics will be less rigorous and discussions will includ more descriptive material than in Section A. Three lectures per week, problems an reports. Prerequisites: Chemistry 1A-1B; Physics 1A-1B-1C-1D (or Physics 2A-2B 3A-3B); and Mathematics 4B (or Mathematics 7B) and credit or registration i Chemistry 101. Chemistry 110A is a prerequisite for Chemistry 110B.

Year course (3-3)

**111. Physical Chemistry Laboratory**

Physico-chemical apparatus and measurements. Discussion period and three laboratory periods per week. Prerequisite: Credit or registration in Section A of Chemistry 110A.

Spring (3)

**114. Biochemistry**

The chemistry of fats, carbohydrates, proteins, vitamins, hormones and enzymes. Chemotherapy, nutrition, digestion and intermediary metabolism are discussed briefly. Three lectures per week. Prerequisite: Chemistry 103. Recommended: Elementary biology or zoology.

Fall (3)

**115. Biochemistry Laboratory**

Laboratory work in the synthesis, isolation and analysis of biochemical materials. Chemical rather than biological considerations are emphasized. Two laboratory periods per week. Prerequisites: Chemistry 5, 102, 103 and credit or registration in Chemistry 114.

Spring (2)

**118. Colloid Chemistry**

The theoretical principles of colloid chemistry and the preparation, properties and practical applications of colloids. Two lectures per week. Prerequisite: Chemistry 101, 110A and 110B.

Fall (2)

**122. Glass Blowing**

Elementary training in the manipulation of glass. Prerequisite: Chemistry 1A-1B. One laboratory period per week.

Fall (1)

**127. Advanced Inorganic Chemistry**

A lecture course dealing with such topics as the physical basis of the periodic system, complex inorganic compounds, and the nature of the chemical bond. Three lectures per week. Prerequisite: Chemistry 1A-1B. Recommended Chemistry 110A-110B.

Spring (3)

**144A-144B. Principles of Chemical Engineering**

Industrial stoichiometry, flow of fluids, heat transfer, unit processes and types of ndustrial equipment. Three lectures per week, problems and reports. Prerequisite: Credit or registration in Chemistry 110A. Chemistry 144A is a prerequisite for Chemistry 144B.

Year course (3-3)

**155. Instrumental Methods of Analysis**

Training in the theory and manipulation of instruments used in modern chemical and physical testing laboratories. Discussions, laboratory work and field trips. Two aboratory periods per week. Prerequisite: Chemistry 5.

Fall (2)

**199. Special Problems**

Supervised individual work in specialized branches of chemistry. Admission only by the consent of the instructor. Hours of credit to be arranged in each case. Open only to students who have shown ability to do A or B work in chemistry.

Fall and Spring (1-2)

## Graduate Courses

**200. Seminar**

Intensive study of some phase of advanced chemistry under the direction of a member of the staff. Each student will choose a topic from one of the following fields for study and will prepare and present a paper on this topic to the staff members and other seminar students.

A. Advanced Organic Chemistry
B. Chemical Kinetics
C. Chemical Thermodynamics
D. Molecular Structure
E. Electrochemistry
F. Advanced Biochemistry
G. Spectrographic Analysis

Prerequisite: Graduate standing with suitable background in chemistry and consent of the instructor. Maximum credit 4 units.

Fall and Spring (2-2)

**299. Special Problems**

Individual work on some topic in advanced chemistry and preparation of formal written report. Problem selected to develop familiarity with chemical literature and research techniques. Prerequisite: Graduate standing with suitable background in chemistry and consent of the instructor. Maximum credit 3 units.

Fall or Spring (1-3)

# COMMERCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *liberal arts major* is offered in commerce. In addition to meeting the general lower division requirements for all students, the following courses are required of commerce majors in the lower division: Economics 1A-1B; Commerce 2, 14A-14B. 18A-18B; Geography 1 and 10, or equivalent; English 2 and 8. Students majoring in the marketing subfield must also include Commerce 20, 24, 25, 27, and Art 7. These students are not required to take Geography 10 and Commerce 2. Upper division requirements: a minimum of 24 upper division units including Economics 111, 140, Commerce 121, and 15 units selected from one of the following groups:

a. Accounting: Commerce 160A-160B, 161A-161B, 162, 164A-164B, 165A-165B.
b. Banking and Finance: Commerce 133, 134, 137; Economics 131, 135, 142.
c. Business Administration: Commerce 123, 125, 126, 127, 133, 134, 137, 153, 184; Economics 128, 150, 142, 170.
d. Marketing: Commerce 123, 153, 184, 185, 186, 187A, 187B, 188, 189; Home Arts 160A-160B.

For a complete outline of the curriculum in commerce, refer to page 53.

A *teaching major* is not offered in commerce; however, certain courses in this field are required as part of the *teaching major in business education* for the general secondary credential and the special secondary credential in business education. For specific information, refer to the outlines of the requirements for these credentials.

### Minor

A *liberal arts minor* is offered in commerce. Lower division requirements: Commerce 14A-14B; Economics 1A-1B. Upper division requirements: 9 units of upper division commerce courses selected from one group as outlined above under the major. Students who elect the marketing group must complete Commerce 24 and 25 or 27 in the lower division.

A *teaching minor* is not offered in commerce; however, certain courses in this field are required as part of the *teaching minor in business education* for the general secondary, the general junior high school, or the special secondary credential. For specific information, refer to the outlines of requirements for these credentials.

Note: Courses in commerce may not be used to meet any part of the lower division social science requirement, nor may they be used as part of a social science major or minor.

### Lower Division Courses

#### A. Business Mathematics

A practical course in the mathematics of business. A thorough study of interest, compound interest, discount, insurance rates, etc.

Fall or Spring (1)

#### 1A-1B. Typewriting

A rapid development of a thorough command of a keyboard by the touch method. The acquisition of speed and the artistic arrangement of typewritten material with special reference to commercial forms, tabulation and billing; specifications, legal forms, and preparation of manuscripts; transcription, mimeographing, etc. Seven hours lecture and laboratory practice. (1A is a prerequisite for 1B.)

Year course (3-3)

#### 2. Mathematics of Finance

Interest and annuities; amortization; sinking funds; valuation of bonds; depreciation; mathematics of building and loan associations; mathematics of life insurance. Prerequisites: Two years of algebra in high school, or equivalents.

Fall or Spring (3)

#### 2A. Typewriting

A short course designed for those not wishing to enter the business office but desiring a knowledge of the use of the typewriter. Five hours laboratory practice.

Fall or Spring (2)

**A. Office Procedure**

Practice and principles of office management, including organization, arrange- ent and operation. Study and use of modern office appliances such as the multigraph, imeograph, filing devices, calculating and bookkeeping machines. Prerequisite: Com- erce 1A or its equivalent.

Fall or Spring (3)

**A-5B. Shorthand**

An intensive course designed for the practical preparation of office secretaries. thorough study of the Gregg System. Development of the ability to read and write orthand rapidly and correctly, both literary and commercial. The shorthand speed cessary to pass a civil service examination is attained by the end of the year. (5A is prerequisite for 5B.)

Year course (5-5)

**-6B. Advanced Shorthand**

Development of speed in writing and transcription. Advanced dictation on letter ms, legal forms, speeches, and literary and technical material. Prerequisite: Com- rce 5A-5B or equivalent. (6A is a prerequisite for 6B.)

Year course (3-3)

**iglish in Business** (See English 8)

**A-14B. Principles of Accounting**

A knowledge of bookkeeping not required and not advantageous. The balance eet; profit and loss statement; various types of books of original entry; the opening, nducting, and closing of books for different kinds of businesses; organizations, reor- nizations, dissolutions, and consolidations, etc., keeping in view the best modern counting practice. Five hours lecture and laboratory. (14A is a prerequisite for 14B.)

Year course (3-3)

**A-16B. Secretarial Accounting**

A course in secretarial accounting covering the fundamental principles of counting and the application of those principles to the accounting work done by lege graduate secretaries and teachers of business education. Required for four- r secretarial and business education majors. (16A is a prerequisite for 16B.)

Year course (3-3)

**A-18B. Commercial Law**

The leading and fundamental principles of business law. Simple cases showing actual application of the principles to commercial and business transactions, rather n the development of those principles. The subjects covered: contracts, sales, ncy, negotiable instruments, insurance, and wills, with a brief study of evidence. her semester may be taken first.

Fall and Spring (3-3)

**Consumer Economics**

Consumer incomes; bases of consumer choice-making; practical problems of ing food, clothing, shelter, transportation, insurance, etc.; family budgeting; rket structure and functions seen from the consumer's point of view; importance he business man of an understanding of the consumers' needs and problems.

Fall (3)

**Organization and Management of Small Business**

A course dealing with the problems confronting the small business man with rd to finance, organization, management.

(3)

**Merchandising**

A study of retail stores, emphasizing the problems of store managers and mer- ndising executives; store location, organization, personnel, sales promotion, buying handling of merchandise, inventory, turnover, and control methods. Changing litions in retailing, problems of profitable operation under present conditions.

Spring or Fall (3)

**25. Salesmanship**

Theoretical and psychological backgrounds of salesmanship, newer concepts selling; the selling of ideas and services; steps in a sale: attention, interest, desi closing; the development of clienteles and of good will; the personal factor in sal manship.

Spring or Fall (3)

**26. Applied Salesmanship**

Classroom practice in selling; supervised work in cooperating stores, or outsi selling; relationships between theory and practice in specific selling situations; ince tive methods of payment in selling; the problem of sales managers in reducing selli costs. Prerequisite: Commerce 25 and consent of instructor.

Spring (2)

**27. Advertising Principles**

A study of advertising as a sales promotional tool in our modern marketi activities, dealing with the organization of the advertising industry; consumer, mark and product analysis; advertising media; preparation of advertisements; measureme of advertising effectiveness; economic and legal aspects of advertising; public re tions; advertising campaigns.

Fall or Spring (3)

**65A-65B. Record Keeping**

A course in the application of accounting practice and principles to accounti practice; the technical arrangement of accounting forms, records and reports fou in business. Opportunity afforded students through the use of practice sets, etc., secure practice in applying principles to actual work done in business. Prerequisit Commerce 14A-14B or 16A-16B. Commerce 65A is a prerequisite for 65B.

Year course (1 to 3 each semester)

**103A. Office Management**

A study of the general functions of the office, the duties of the office manag the organization of the office including record keeping and the efficient use of calc lating and other similar equipment. Two hours lecture and 3 hours laboratory p week. Not open to students who have credit for Commerce 3A.

Fall or Spring (3)

**103B. Office Management**

A study of the organization, direction and improvement of the communicati functions and records of the office together with a study of improvement in the us of dictating machines, duplicating machines and filing techniques. Two hours of lectu and 3 hours of laboratory per week. Not open to students who have credit for Co merce 3A. Prerequisite: Commerce 1A or its equivalent.

Fall or Spring (3)

**118A-118B. Advanced Commercial Law**

An advanced study of the law of personal and real property, partnership, co poration and the laws regulating trade and trade practices and competition. Electi for commerce majors.

Fall and Spring (3-3)

**121. Business Administration**

Problems of business administration as an interrelated whole and as an indicati of lines of study which may lead to the solution of those problems. A discussion of t problems of the business administrator with particular reference to the character of t problems involved and to the control policies and devices of the manager. Questio problems, and case studies. Prerequisite: Economics 1A-1B.

Fall or Spring (3)

**123. Marketing Principles**

A general survey of the field of marketing covering such topics as the place marketing in our economic structure; consumer demand in relation to the marketi machinery; marketing functions; marketing activities of producers, wholesale retailers and other middlemen; channels of distribution; integration of marketi

tivities; price policies; government regulation; analysis of marketing costs, effi-
ency and trends. Prerequisite: Economics 1A-1B or Commerce 45A-45B if earned
ith grades of A or B.
Fall or Spring (3)

### 4. Marketing Administration

An advanced course dealing with all the phases of marketing utilized in most
stributive campaigns. Basic marketing principles are applied to the solutions of
actical problems faced by producers, wholesalers, retailers and other middlemen
the marketing of their products. Problems covered include adaptation of products
meet consumer demand; selection of channels of distribution; brand policy; sales
omotion; price determination; operating control; legislative regulation of prices;
agnosis marketing policies. Prerequisite: Commerce 123.
Spring (3)

### 5. General Insurance

Economic theory of risk, its extent and importance to both the individual and
siness; transfer of risk; distribution and prevention of loss; types of insurance
rriers; problems of rate making; the insurance contract; coverages; special forms
life, fire, marine and casualty insurance; state supervision.
Fall (3)

### 6. Casualty Insurance

The nature and reasons for existing practices in compensation and casualty
surance. The social and legal bases of insurance, fundamental principles of rate
king, policy provisions, state regulation and state insurance.
Spring (3)

### 7A. Life Insurance—Principles and Practice

A study of social and individual values involved in the institution of life insur-
ce. The student is then directed to the types of life insurance companies and asso-
tions, home office and agency organization, types of contracts, surrender value, policy
ins and extended insurance, surplus and dividend policies, reserves, group, industrial
d social insurance, and state supervision.
Fall (3)

### 7B. Life Insurance Salesmanship

A study of the special problems of life insurance selling, with emphasis on the
chological aspects of insurance selling, and on specific techniques for finding pros-
ts, and for managing the sales interview. A course for students interested in life
urance selling, and for those planning to obtain life underwriter's certification.
Spring (3)

### A-128B. Advanced Life Insurance

An advanced course in life insurance. The emphasis is on preparation for the
L. U. Certificate. 128A is a prerequisite for 128B.
Year course (3-3)

### . Corporation Finance

The corporate form of organization, instruments of long-time finance, methods of
sing capital, efficient financial management, the financing of reorganizations, and
ernmental control. Prerequisite: Economics 1A-1B. Not open to students who have
dit for Economics 133.
Fall (3)

### . Investments

Investment principles and practices with emphasis upon problems of the small
estor, such as tests of a good investment, sources of information, types of stocks and
ds, mechanics of purchase and sale, investment trusts, real estate mortgages, and
like.
Spring (3)

**137. Credits and Collections**

The credit man and his work, including the instruments with which he wor sources of credit information, the technique of his department, collection metho legislation for the protection of debtor and creditor, and credit insurance.
Fall (3)

**153. Personnel Administration**

Problems in the management of personnel relations, including techniques selecting, training, supervising and rating employees. Methods used by managem in job evaluation; wage and salary payment plans; employee services; health a safety; union relationships; stimulation of interest; control of turnover and absent ism, etc. Case studies of personnel department procedures in local business and g ernmental organizations.
Fall or Spring (4)

**160A-160B. Advanced Accounting**

An intensive study of the corporation, its accounting and financial problems thorough study of the balance sheet; depreciation; factory accounting, etc. P requisite: Commerce 14A-14B. (160A is a prerequisite for 160B.)
Year course (3-3) (Offered in 1948-49 and alternate years)

**161A-161B. Cost Accounting**

Principles and methods of cost accounting in the mercantile establishment a in the factory. A study of bookkeeping procedure, the forms used, and their ap cation to practical problems. 161A is a prerequisite for 161B.
Year course (3-3)

**162. Accounting Systems**

The accounting systems used in various types of business and financial concer Some practice in devising and installing systems. Prerequisite: Commerce 14A-14
Fall (3)

**164A-164B. Income Tax Procedure**

A consideration of the problems arising from state and federal income, inherita and corporation tax. The problems are approached from the point of view of the t payer who desires to determine the exact application of the law to the interests represents as well as from the accounting point of view. 164A is a prerequisite for 164
Year course (3-3)

**165A-165B. Auditing**

The fundamental principles of accepted procedures of auditing and related ty of accounting engagements. 165A is a prerequisite for 165B.
Year course (3-3)

**167. Governmental Accounting**

A comparative study of accounting systems used by municipalities, counties, a the State of California; detailed comparisons with commercial practice; procedures handling budget accounts, appropriations, and encumbrances; subsidiary records; c records; internal checks; auditing.
Spring (3)

**184. Sales Management**

Consideration of the problems confronting the modern sales executive. Attenti is given to the development of methods of handling internal and external phases of t work of sales departments, including such topics as sales organization; selection, tra ing, compensation and control of the sales force; sales analysis and planning; sa quotas; sales costs and budgets; market and product research and analysis; coordi tion of personal selling with other form of sales effort.
(3)

**185. Advertising Copy and Layout**

Introduction to principles and techniques of copy writing; selection and pres tation of appeals; types of copy for various types of products, advertisers and medi preparation of layouts; mechanical methods employed by the artist, engraver a

inter to give effective interpretation of the idea ; legislation and regulations affecting lvertising claims. Prerequisite : Commerce 27.
(2)

### 6. Store Management Problems

Locations, buildings, layouts and fixtures; store supplies and maintenance; ceiving, marking, storing, wrapping and delivering merchandise; customer service, justments, credit and collections; expense control; case studies in store operating oblems. Prerequisite : Commerce 24.
(2)

### 7A. Buying Techniques

Buying as a career; merchandising organization in department and specialty ores and chains; customer demand; determination of what to buy; functional bureaus at aid in buying; model stock plans; merchandise resources; foreign buying; trading chniques; terms and discounts; credit and shipping terms; legal aspects or ordering; ands and labels; the regulation of trade practices; case studies in buying problems. erequisite : Commerce 24.
(2)

### 7B. Merchandising Techniques

A study of the merchandising operations of retail stores; exclusive of buying nctions. Special attention to methods of dollar and unit control; pricing, turnover, ventory methods and control; legislation affecting merchandising methods and prices; rchandise budgets; arithmetic of merchandising; and studies of profitability of spe- ic methods of merchandising. Case studies will be made by students, covering vari- s aspects of merchandise operations in local stores. Prerequisite : Commerce 24.
(2)

### 3. Advertising Media

A thorough coverage of advertising media, including newspapers, magazines, farm pers, business papers, direct advertising, sign advertising, radio advertising and vari- s miscellaneous types of media, considered from the point of view of large and small vertisers in a variety of business situations. Special topics include market character- ics; rates and sources of information; evaluation of media; problems of coverage, plication, costs and scheduling; advertising salesmanship. Prerequisite : Com- rce 27.
(2)

### Advertising Problems

Principles of advertising are applied to the solution of actual advertising prob- ns encountered by business firms. Topics covered include: estimating opportunities effective use of advertising; building effective promotional campaigns; selection of dia; retail advertising, national advertising, advertising agencies; advertising serv- s of publishers. Throughout the course emphasis is upon advertising as a sales pro- tional tool, viewed from the administrative point of view. Prerequisite : Com- rce 27.
(3)

### A-198B. Investigation and Report

A comprehensive and an original study of a problem connected with business ler the direction of one or more members of the commerce staff. Prerequisite : Senior nding and consent of the instructor. 198A is a prerequisite for 198B.
(1 to 3 each semester)

## Graduate Courses

### Seminar in Office Management

An intensive study of the problems of office management and their solution. The tion of records, reports, budgets and manuals to managerial control. Prerequisite : nmerce 3A, Commerce 14A-14B, 121, and graduate standing.
(2)

**223. Problems of Distributive Business**

Critical Analysis of distributive business problems in the light of changing e nomic, social and governmental conditions. Prerequisite: Commerce 121, 123, and gr uate standing.
(2)

**213. Problems in Business Education**

Designed to fit the needs of individual students and their problems through writing of research papers, of a term or individual study nature. The studies to be ma will cover the principles of good teaching, trends in Business Education, current lit ature, and similar problems. Prerequisite: Graduate standing.
(2)

**233. Administration and Supervision of Business Education**

Designed to provide students who hold, or who expect to hold, administrative po tions in Business Education with the techniques necessary for successful executi work. Topics considered: In-service training, hiring, promotion, research, classro organization, tests and measurement, guidance, supervision, classroom materials a equipment, and extra-curricular activities. Prerequisite: Graduate standing.
(2)

**260. Advanced Problem Analysis** (Accounting)

The study of conditions causing various accounting problems with spec emphasis upon the theory and practices involved in their solution. Prerequisit Commerce 160A-160B, 161, 165, and graduate standing.
(2)

# COMPARATIVE LITERATURE

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *liberal arts major* is not offered in comparative literature; however, courses in is field may be used as part of the liberal arts major in English. For specific informa-on, refer to English.

A *teaching major* is not offered in comparative literature; however, courses in is field may be used as part of the teaching major in English for the general secondary d general junior high school credentials with the approval of the departmental repre-ntative. For specific information, refer to the outlines of requirements for these edentials.

### Minor

A *liberal arts minor* is offered in comparative literature. The minor must include least 15 units of work in comparative literature, 9 units of which must be from urses carrying upper division credit.

A *teaching minor* is not offered in comparative literature; however, courses in is field may be used as part of the teaching minor in English for the general sec-dary, the general junior high school, the special secondary, the general elementary, d the kindergarten-primary credentials. For specific information, refer to the out-es of requirements for these credentials.

### Lower Division Courses

**A-52B. Masterpieces of World Literature**

A chronological survey from Homer to modern times. The first semester stresses e classical epic and tragedy. The second semester, beginning with the Renaissance, resses prose fiction, the drama, and the essay.

Year course (3-3)

### Upper Division Courses

**1A. Modern Continental Fiction**

A survey of leading French, Russian, Scandinavian, Italian, and German novel-is and short story writers, from Tolstoy and his associates to the present day.

Spring (3)

**4A-104B. Spanish American Literature**

For a description of this course, see Spanish 104A-104B, which may be taken for edit in Comparative Literature by doing the required reading in English translation.

Year course (3-3)

**5. The Bible as Literature**

A study of the narrative, poetry, and prophecy of the King James version of the ble. Readings, reports, lectures, and discussions.

Fall (3)

**0A-140B. Masterpieces of French Literature**

A cultural course designed to be given in introduction to the great French works om the Song of Roland through Cyrano de Bergerac, with emphasis on the 16th, 17th, th and 19th century authors. The contributions to world thinking of Rabelais, Mon-gne, Moliere, Racine, Descartes, Pascal, Montesquieu, Voltaire, Rousseau, Hugo, lzac, Flaubert, Maupassant, Zola, will be studied through lectures and outside adings.

Year course (3-3) (Offered in 1949-1950 and alternate years)

**2A-152B. Survey of Drama**

Study of selected tragedies and comedies from Asiatic, European, English, and erican literature, with emphasis upon the human problems depicted therein and on the timelessness of certain themes, such as those of Electra and Medea. Lectures, cussions, and reports on readings.

Year course (3-3)

**155. Literature of the Continental Renaissance**

Development of Renaissance literature in western and southern Europe. Studi in the works of Dante, Petrarch, Ariosto, Tasso, Erasmus, Calvin, Cervantes, Ral lais, Montaigne, and other significant authors.

Spring (3)

**158. Classicism in European Literature**

Aims, ideals, themes, influences, literary manners and methods of the period classicism in European literatures, particularly that of France. Studies in the writin of Moliere, Racine, Descartes, Boileau, Montesquieu, Voltaire and others.

Fall (3) (Offered in 1949-1950 and alternate years)

**159. The Rise of Romanticism in European Literature**

Continental origins and growth of the romantic movement. Studies in the wor of Rousseau, Goethe, Schiller, Lessing, Chateaubriand, Mme. de Stael, and others.

Spring (3)

# ECONOMICS

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *liberal arts major* is offered in economics. Lower division requirements: Eco-omics 1A-1B; Commerce 14A-14B; and at least one of the following groups: Political cience 1A-1B, or 71A-71B; History 4A-4B, or 8A-8B, or 17A-17B; Psychology 1 and 0; Sociology 50A-50B; or Anthropology 1A-1B. Recommended: Commerce 18A-18B; eography 1, 10; Mathematics C. Upper division requirements: a minimum of 24 pper division units including Economics 100A, 140, and 100B or 111, and 15 addi-ional units in economics. A maximum of 6 of the additional units may be chosen rom courses in a related field with the approval of the departmental representative.

A *teaching major* is offered in economics for the general secondary credential r as part of the *social science major* for the general junior high school credential r the general secondary credential. For specific information, refer to the outlines f requirements for these credentials.

### Minor

A *liberal arts minor* is offered in economics. The minor must include at least 5 units of work in economics, 9 units of which must be from courses carrying upper ivision credit.

A *teaching minor* is offered in economics for the general secondary credential, r as part of the *social science minor* for the general junior high school, the special econdary, the general elementary, and the kindergarten-primary credentials. For pecific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**A-1B. Principles of Economics**

The basic principles of economics: utility, wealth, value, price; economic pro-uction, distribution, and consumption; rent, interest, wages, and profit; competition, onopoly, and large scale production; property, economic waste, and luxury; money nd banking, international trade and tariffs; transportation corporations, labor prob-ms, socialism, taxation, etc. Aims of the course: (1) to provide a foundation for rther intensive study of economic problems; (2) to furnish to those who expect to llow business pursuits a broad foundation in economic principles; and (3) to intro-uce future citizens to political and economic problems of our time. Lectures, discus-ons, quizzes, and collateral reading. Not open to entering freshmen except by special rrangement. (1A is a prerequisite for 1B.)

Year course (3-3)

### Upper Division Courses

**0A. Modern Economic Thought**

Advanced economic theory with special reference to value and distribution. pecial attention is given to marginal utility theory, and to the contribution of modern onomic thought. Prerequisite: Economics 1A-1B.

Fall (3)

**0B. Modern Economic Thought**

Subjects include recent developments in the evolution of economic ideas, and ends in modern theory. The American, Keynesian, and other contributions will be amined. Prerequisite: Economics 1A-1B.

Spring (3)

**2. Comparative Economic Systems**

A study of the economic aspects of laissez-faire and regulated capitalism, social-m, communism, Nazism, Fascism. Comparative experience in Russia, Germany, the nited States, Great Britain. Criteria for evaluating economic systems. Positions of e individual and government in each system. Planning in a liberal capitalism society. operatives.

Spring (3)

**110. Economic History of Europe**

A general survey of economic development from the Middle Ages to the prese Particular attention is given to the impact of the Industrial Revolution on natio economics, particularly on England's commerce and industry.

Summer 1948 (3)

**111. Economic History of the United States**

A comprehensive survey of American economic development and of natio legislation in the field of industry and commerce.

Spring (3)

**128. Land Economics**

Real estate in all its aspects: property rights, transfer of title, valuation, finan selling, property management, taxation, insurance, city planning, and the like, w special emphasis upon problems as they exist in San Diego. Prerequisite: Econom 1A-1B.

Fall (3) (Not offered 1948-49)

**131. Public Finance**

Principles and practices of taxation and public expenditures. Economic effe of public spending, debts and taxation. Financing social security and other servic Fiscal policy and prosperity. Relation to inflation and deflation. Special empha on social problems involved.

Spring (3)

**133. Corporation Finance**

The corporate form of organization; instruments of long-time finance; meth of raising capital, efficient financial management, financing of reorganizations, a government control. Not open to students who have had Commerce 133.

Spring (3)

**135. Money and Banking**

The elements of monetary theory. History and principles of banking with spec reference to the banking system of the United States. Prerequisite: Economics 1A-1

Fall (3)

**140. Statistical Methods**

The nature and uses of statistical method in the social sciences. Practice tabular and graphic presentation of data; analysis of frequency and time seri index number construction and study of correlation techniques. Prerequisite: Matl matics A-B, and C or equivalent.

Fall (3)

**142. Business Cycles**

Fundamental factors in business cycles are analyzed and cycle theories examined. Study of current business conditions begins early in the course and devel into practical application of forecasting methods to both business and other da Prerequisite: Economics 1A-1B.

Spring (3)

**150. Labor Problems**

A study of labor organizations and their policies, wages, strikes, unemployme social insurance, child labor, labor legislation, plans for industrial peace, and otl labor problems.

Fall (3)

**170. Government and Business**

General survey of governmental activities affecting business; the state as entrepreneur and manager; governmental assistance to business; governmental re lation of business in its historical, legal and economic aspects, including recent dev opments in the United States and abroad; proposed policies.

Fall (3)

### 71. Transportation

The development of railway transportation; railroad financing; rates and rate aking; governmental regulation; government operation of railroads during the war; cent development of motor and air transportation. Prerequisite: Economics 1A-1B.
Fall (3)

### 72. Public Utilities

The growth of public utilities in the United States; economics of public utility tes; valuation; public regulation and its legal basis; public ownership. Prerequisite: conomics 1A-1B.
Spring (3)

### 35. Social Insurance

The need for social security and attempts to meet these needs through social surance and other devices, including old age pensions, health insurance, unemploy-ent insurance, and Social Security Act. Strength and weakness of existing systems. eed for extension; proposals.
Fall (3)

### 0. Principles of Foreign Trade

National welfare and foreign trade. Principle of comparative costs, comparative lvantages in various nations. Foreign exchange and the balance of payments, financing reign trade. Regulations over trade and obstructing factors. Techniques of exporting d importing. Doctrines of international trade.
Fall (3)

### 5. International Economic Relations

Important aspects of international cooperation and conflict in the economic here, conditions essential to future cooperation. The quest for foreign markets, raw aterials, investment opportunities and population outlets. Commercial policies, inter-tional economic conferences and organizations. Colonial rivalries and postwar oblems.
Spring (3)

### 8. Investigation and Report

Designed to stimulate independent study and investigation; to furnish guidance the collection, organization, and presentation of factual material; to improve the chnique of term reports.
Fall and Spring (3-3)

### 9A-199B. Special Study

Designed exclusively for seniors with a major in economics.
Fall (1), Spring (1 or 2)

## Graduate Courses

### 0A-200B. Seminar in Modern Economic Thought

A critical study of contemporary economic thought to provide a clearer under-anding of major economic problems of the day. Prerequisite: Graduate standing and nsent of the instructor.
Fall and Spring (2-2)

# EDUCATION

## IN THE DIVISION OF EDUCATION

### Major

A *liberal arts major* is not offered in education; however, education is a majo for the general elementary and kindergarten-primary credentials. For specific infor mation, refer to the requirements for these credentials.

A *teaching major* is offered in education for the general elementary and kinder garten-primary credentials.

### Minor

A *liberal arts minor* is offered in education. This minor consists of a minimum o 15 upper division units in education selected from Education 102A-102B, 102C-102D 115A-115B with the approval of the Dean of Professional Education.

A *teaching minor* is not offered in education.

### Lower Division Courses

A. Review of Arithmetic
H. Review of Handwriting
R. Review of Reading
S. Review of Spelling

Each of the Review courses is a noncredit course designed to increase competenc in the skill subjects. Diagnosis of individual student difficulties will be made followe by directed practice and evaluation of progress. Open only to students who do no qualify on the respective sections of the Fundamentals Test required of all applicant to teacher education.

Fall or Spring (0)

**50. The School and Society**

A nonprofessional survey of education designed to acquaint the student with th school as a social institution in American life. Lectures will be given by differen instructors who will lead discussion periods on the various topics. Students majorin in education should consult the instructor.

Fall or Spring (2)

### Upper Division Courses

**100B. Methods and Materials of Instruction and Audio-visual Aids**

A series of professional courses in specific teaching fields designed to be take just prior to or concurrently with the first directed teaching assignment. Each cours emphasizes the application of principles of best practice with reference to motivatio individual differences, audio-visual aids, evaluation and the achievement of an effectiv learning situation in the major and minor subject fields.

Subject fields for sections in 100B are as follows:

100B-A, Methods in Art
100B-B, Methods in Accounting
100B-BE, Objectives and Curricula in Business Education
100B-E, Methods in English
100B-L, Methods in Romance Language
100B-MA, Methods in Mathematics
100B-ME, Methods in Merchandising
100B-MU, Methods in Music
100B-PE, Methods in Phys. Ed. (Men)
100B-PE, Methods in Phys. Ed. (Women)
100B-SC, Methods in Science
100B-S, Methods in Shorthand
100B-SA, Methods in Speech Arts
100B-S.SC, Methods in Social Sci.
100B-SS, Methods in Secretarial Subjects
100B-T, Methods in Typing
Fall (3) [Major (2)] [Minor (1)]

**02A. Measurement and Evaluation in Elementary Education**

A course required of all students preparing for an elementary teaching credential. t deals with the use of tests in the diagnosis and improvement of learning; construction of objective examinations; problems of evaluation in education; and the lements of statistical techniques.

Fall or Spring (3)

**02B. Child Growth and Development**

The course deals with a study of the mental, emotional, social, and physical levelopment during childhood and early adolescence. Directed observation required. Not open for credit to students who have credit for Psychology 102.

Fall or Spring (3)

**02C. Growth and Development of the Adolescent**

A course to improve understanding of the adolescent's physiological, psycho-ogical, social, and emotional development. Field work with adolescent groups in the ommunity is required. To be taken during the junior year. (Not open for credit to tudents who have credit in Psychology 103.)

Fall or Spring (3)

**02D. Measurement and Evaluation in Secondary Education**

This course deals with problems of evaluation in secondary education, construc-ion of examinations, the elements of statistics, the selection and interpretation of tandardized measures. Field work required.

Fall or Spring (2)

**15A. History and Philosophy of Education**

Historical backgrounds and underlying philosophies upon which the public chool system has been established. Emphasis will be placed on the meaning of educa-ion, educational aims and values, and democracy and education. Prerequisite: Senior tanding or the equivalent.

Fall or Spring (2)

**15B. Secondary Education**

This course will serve as an introduction to understanding the development of econdary education and its present status as a social institution. The topics developed will include: curriculum; teaching methods; organization and administration; guid-nce; and objectives. Field work required. To be taken during the junior year.

Fall or Spring (3)

**16. Directed Teaching**

Systematic observation, participation and teaching under supervision in the ampus elementary school, the affiliated elementary, junior high and senior high chools. During each semester of student teaching in the secondary schools a weekly onference period is required as indicated in the time schedule.

The general plan is for elementary school credential candidates to take, following he education practicums, a half-day of teaching daily for one semester in the campus lementary school or in one of the affiliated elementary schools. Junior high school nd special secondary school credential candidates will be guided by their adviser elative to the distribution of their student teaching. For those seeking a combination f credentials, the requirements for each teaching level must be satisfied. Further nformation regarding this requirement should be requested of the Dean of Professional ducation when the student first registers for directed teaching.

Thirty clock hours of student teaching will usually carry one unit of credit in the ourse, but the final amount of credit allowed will depend upon the character and uality of the teaching done by the student. Student teaching requirements may be educed for those who furnish evidence of successful public school experience.

The maximum amount of credit allowed for student teaching is 12 units.

The universities usually reduce the amount of student teaching credit they will llow to four units. Students planning to transfer to such institutions should be repared to meet this reduction with an equal number of acceptable units in other ourses.

No grade below "C" is acceptable for credit in student teaching.

Prerequisites: Completion of 75 units of college work; admission to teacher ducation; a C average in all college work and in the work of the preceding semester;

three units of work in psychology; a minimum of one semester's work in this college No credit will be given unless the student registers in advance for this course in th office of the Dean of Professional Education.
Fall or Spring (a maximum of 12 units )

**117A. Elementary Music Education**

Objectives of music teaching in the elementary school. Study of the child voice Organization of song material by grades. Procedure in presenting rote songs, ear training, elementary notation, music reading, and part singing. Conducting. Prerequisite Music 1A, or the equivalent. Not open to students who have had Music 7A.
Fall or Spring (2)

**117B. Methods in Instrumental Music**

A study of the theory of problems or organizing and conducting school band and orchestras, and the selection of materials. Provides practical experience in conducting a children's orchestra and teaching sectional groups. A study of systemati planning of courses of study for pupils of various ages and abilities will be made.
Fall or Spring (2)

**119. Art in the Elementary School**

Discussion of the elements and principles of art and their place in the ar expression and appreciation of the elementary school child. Lectures illustrated with examples of children's work and opportunity given for experience with media use in elementary school problems. Not open to students taking the elementary credential Prerequisite: Art 6A.
Fall or Spring (2)

**122. Social Studies in the Elementary School**

A study of the nature and purpose, scope, organization and instructional procedures in the social studies in the elementary school. Opportunity will be given fo the development of curriculum units and the analysis of teaching materials.
Fall or Spring (2)

**123. Science in Elementary Education**

A laboratory course designed to assist teachers in developing a science program related to the elementary curriculum. Study will be made of the following topics Objectives of elementary science, the relation of science experiences to instructional units in the social sciences, the construction and use of equipment, the effective use of audio-visual aids, the use of environmental resources, and the use of texts an supplementary material. Each student in the course will participate in the preparation, demonstration, and evaluation of typical science experiments.
Fall or Spring (3)

**125. Curriculum in Elementary Education**

A systematic survey of the following elementary subject areas: The languag arts, mathematics, music, science, and the social sciences. Emphasis will be placed upon the selection of content, teaching methods, and materials as they relate to social needs, psychological principles, and the nature of the learner.
Fall or Spring (3)

**126. Literature in Elementary Education**

An introduction to children's literature at all levels of the elementary school. Consideration will be given to the following topics: Criteria for the selection of children's literature, children's reading interests, children's literature and the development of units of instruction in the social studies, the use of the verse choir, dramatic readings and similar procedures, and the use of the library. Each student in the course will have an opportunity to read widely in the field.
Fall or Spring (3)

**129. Arithmetic in Elementary Education**

A course for teachers of arithmetic in the elementary and junior high school. Emphasis is placed upon the understanding of the systems of notation and language techniques. Opportunity will be given for the development of instructional materials and procedures.
Fall or Spring (2)

### 0. Educational Psychology

A study of the science of human behavior as it relates to learning. Emphasis is ven to the principles of learning and the nature of the learner. Some of the areas eated are the growth of meanings, thinking, memory and habit formation, motiva- n, transfer of learning, organic and environmental conditions affecting learning, dustrial differences, and the theory of audio-visual education. Observation and field ork required. Prerequisite: Psychology 1. Not open to students with credit for ychology 130.

Fall or Spring (2)

### 6. Reading in Elementary Education

A systematic study of the reading process. Emphasis will be placed on reading a thinking process. Consideration will be given to topics such as: Scientifically veloped procedures for determining reading readiness, beginning reading, inde- ndence in work recognition, vocabulary development, word analysis, standards of tainment, types of reading programs, and the selection, preparation and use of ading materials. Analysis will be made of individual and group learning problems roughout all levels of the elementary school.

Fall or Spring (3)

### 3. Adult Education

A study of the aims and scope of adult education and its function as a part of e public school system. Individual and group work will be emphasized. Admission permission of the instructor.

Fall or Spring (3)

### 4. Diagnosis and Remedial Treatment of Difficulties in Reading

A study of the causes of reading difficulties and the procedures for diagnosis d remedial treatment. Students will be expected to do practical work with children 10 have reading difficulty. The work is designed primarily for principals, supervisors d teachers-in-service. Prerequisite: Education 102B or Education 102A, or one ar of successful teaching experience.

Fall or Spring (3)

### 5. Organization and Administration of Music Education

Theory of the general principles of music administration; correlation of music th the various subjects in the public schools; music tests; creative work.

Fall or Spring (2)

### 6. Education Practicum (Kindergarten-Primary)

This course is a continuation of Education 148 and will accompany Education 6 in the kindergarten. A study of the theory of early childhood education providing perience with children of nursery school and kindergarten ages. Prerequisite: Educa- n 147, 148.

Fall or Spring (4)

### 7. Education Practicum

This course is required of all students who expect to receive a credential which ll qualify them to teach in the kindergarten or in the elementary school. Students ould take the course during the next semester after admission to Teacher Education, ich is usually the first semester of the junior year. Registration is strictly limited those who have been approved by the Committee on Admission to Teacher Education.

Education Practicum is a unified course which deals with the interpretation and elligent application of theory and practice in elementary education. The child d accumulated knowledge are studied as one affects the other. The psychology of rning is interpreted while the college student is immediately associated with chil- en in the process of learning. For two or three hours each day classes are held in ich the psychology and philosophy of education are studied and analyzed as systems knowledge and concurrently interpreted in reference to the actual teaching partici- tion to which the student is assigned for one hour daily. The course includes thods in Primary Reading (2); Elementary School Methods, including Children's

Literature (2) ; Elementary Music Education (1) ; Elementary Art Education (1) Mental Hygiene and Speech (2) ; Directed Teaching (2).

The course is taught by college teachers who supervise in the Campus Elementary School, and other faculty members (10).

Fall or Spring (10)

### 148. Education Practicum

This course is a continuation of Education 147 and is required of all students who are candidates for the general elementary credential or the kindergarten-primary credential. An extended analysis is made of the psychology of education in various fields and application is made through directed teaching in grades 4 to 6. The course includes Elementary Arithmetic Education (2) ; Elementary Social Studies and Science Education (2) ; Elementary Art Education (1) ; Elementary Music Education (1) ; Educational Psychology (learning process and theory of audio-visual education) (2) Additional 4 units for General Elementary only : Language Arts (2) ; Directed Teaching (2). Prerequisite: Education 147.

Fall or Spring (12)

### 149A. Laboratory in Elementary Education

A general course in observation and theory, including a study of arithmetic, reading, language, music, science, social studies, art, spelling. Students in this course will observe in the summer demonstration school and discuss with the staff the teaching procedures.

Summer only (3)

### 149B. Workshop in Elementary Education

Students in this course will select a problem related to their professional assignment for the coming year and work upon it in the summer session under the guidance of the staff. Students should correspond with the Director of Elementary Education in advance to secure most effective planning of the course. This course may profitably be combined with 149A, the two courses in combination giving 6 units of credit.

Summer only (3)

### 149C. Laboratory in Rural Education

Observation in a one-room multigraded summer demonstration school. Students will observe demonstrations, discuss procedures with the staff, and prepare material for their own schools.

Summer only (6)

### 149D. Workshop in Elementary Education

Participants in the workshop will select classroom problems for study under the guidance of workshop consultants.

Summer only (3)

### 155. Principles of Guidance

A study of the basic principles of guidance and their function in the educational process.

Fall or Spring (3)

### 156. Guidance Conference

A series of lecture and discussion sessions centering on current problems in counseling and guidance. Designed to serve the needs of teachers, administrators, counselors, personnel workers, and others desiring to keep informed of developments in this area. Admission upon permission of the director of this conference.

Summer only (1)

### 161. Legal Aspects of Education

A study of the school law of California, important court decisions, rulings of the California State Superintendent of Public Instruction and the Attorney General, historical and current trends, and comparative data from throughout the United States.

Fall or Spring (3)

### 74. Audio-visual Education

A study of audio-visual aids as they affect learning. Analysis and development of aterials of instruction and their presentation ; operation of equipment.

Fall or Spring (2)

### 4BE. Audio-visual Business Education

A review of the skills and knowledges necessary to use Audio-Visual aids, llowed by intensive study and research in the literature available and by practice ith the materials and techniques that apply to business education.

Summer (3)

### 6. Problems of Speech Correction and Articulation

Analysis and discussion of the major articulatory problems as encountered in iblic school work, particularly in California. Required of all students for the speech rrection credential.

(3)

### 7. The Teaching of Lip Reading

History, theory and methods of lip reading. Aids for the classroom teacher ; pro- am and materials of instruction for the specialized teacher. Opportunities for practice aching are offered.

(2)

### 8. Problems of the Hard of Hearing

The adjustment of the hard of hearing group with emphasis on the public school ild. State and county hearing programs ; technique of audiometry ; use of hearing ds ; educational, classroom, and social problems.

(2)

### 9A-179B. Nervous Speech Disorders

Classification of speech defects and disorders. Nervous speech disorders ; stam- ering, stuttering, hesitation, cluttering. Teacher training in corrective technique for e in public schools ; clinic observation. Required of candidates for the Special Sec- dary Credential in Correction of Speech Defects. Not open to students with credit in eech Arts 179A-179B.

Year course (3-3)

### 1. Exceptional Children

A course designed to meet the needs of teachers of the mentally handicapped, but o open to all teachers interested in studying the problems of exceptional children. A idy will be made of mental, physical, and emotional deviates.

Fall (3)

### 2. Curriculum and Methods for Teaching Mentally Retarded Children

The course deals with the selection, organization and presentation of curricular terials for teaching mentally retarded children.

Spring (3)

### 3. Practicum for Teaching Mentally Retarded Children

Interpretation and application of educational procedures utilized in teaching the arded learner. A demonstration class will be available for observation. Educa- n 182 must be taken prior to, or concurrently with, Education 183.

Summer only (3)

### ). Educational Problems

A course for senior and graduate students in residence and enrolled in teacher ication who have shown ability to work independently on educational problems. The blem will be chosen after consultation with a staff member. Admission by consent the staff. Credit and hours to be arranged.

Fall or Spring (Credit to be arranged)

## Graduate Courses

See page 12 for general requirements for admission to graduate courses. In addition to these general requirements, 12 units of professional education are prerequisite for enrollment in all graduate courses.

### 200. Seminar in Elementary Education

A study of the methodology of research with particular reference to the basic research in the psychology and teaching of the elementary school subjects. Prerequisite: 12 units in elementary education, consent of the instructor, and graduate standing

Fall or Spring (2)

### 201. Curricular Problems in Secondary Education

A study of the present status and development of the secondary school curriculum Emphasis will be placed upon individual study and development of solutions of problems of the students. Prerequisite: Graduate standing and consent of the instructor.

Fall or Spring (3)

### 202. Guidance Problems in Secondary Education

Individual and group study of the theory and practice of guidance with emphasis upon practical problems of the members of the class. Prerequisite: Graduate standing and consent of the instructor.

Fall or Spring (3)

### 203. Research in Curricular Problems

Individual study by graduate students who have demonstrated exceptional ability and a need for such work. Admission by consent of the Director of Secondary Education. Prerequisite: Graduate standing.

Fall or Spring (1 to 3)

### 204. Research in Guidance Problems

Individual study by graduate students who have demonstrated exceptional ability and a need for such work. Admission by consent of the Director of Secondary Education. Prerequisite: Graduate standing.

Fall or Spring (1 to 3)

### 236. Teaching of Reading

Advanced study of developmental instruction in reading. Problems to be considered include reading readiness, the teaching of word recognition, developmental sequences in reading skills and abilities, reading in the content fields, individual differences, measurement, and interests. Students will select projects or problems of immediate interest to them. Prerequisities: Education 136 and 144, or equivalents, and graduate standing.

Fall or Spring (3)

### 255. Workshop in Secondary Education

This course is designed to meet the needs of individual or groups of teachers who wish to develop or continue the study of some problem with the consultation of the College Staff and the San Diego County Curriculum Staff. Teachers should correspond with the Director of Secondary Education, San Diego State College, before registration to secure maximum value from this course. Prerequisite: Graduate standing.

Summer only (4)

### 260. Federal, State, County and City School Organization and Administration

A study of the organization, administration and supervision of federal, state, city and county school systems. Includes school finance, housing, and business administration. Prerequisite: Graduate standing.

(3)

### 262. The Organization and Administration of Elementary Schools

A study will be made of the problems of personnel, local finance, curriculum, plant, community relations, and legal aspects of elementary schools. Required as a prerequisite to Education 266. Prerequisite: Teaching experience and graduate standing.

(3)

### 63. The Organization and Administration of the Secondary School

A course designed for persons preparing for secondary school administration. opics will cover all aspects of the duties of an administrator, including: personnel; nance; curriculum; equipment and supplies; public relations; transportation and w. Prerequisite: Possession of a valid General Secondary Credential and graduate anding.

(3)

### 64. Elementary School Supervision

Principles and practices of supervision and methods of evaluating instruction id the curriculum in elementary education. Prerequisite: General elementary credenal and teaching experience.

(3)

### 65. Secondary School Supervision

A course designed for those who will be responsible for the supervision and evaluion of the curriculum and teaching methods in the secondary school. Prerequisite: ossession of a valid General Secondary Credential and graduate standing.

(3)

### 66. Field Work in Elementary School Administration and Supervision

A first-hand study of the administration and supervision of an elementary school, required for the Elementary School Administration and Supervision Credentials. ield work will be carried on by all students under the direction of a college staff memr. Prerequisites: Education 262 or 264 and graduate standing.

Fall (2)

### 67. Field Work in Secondary School Administration and Supervision

A study of practices as they are found in secondary schools relative to adminisation and supervision; to insure direct contact with existing programs and proceures. Prerequisite: Education 263 or 265 and graduate standing.

(3)

### 6. Directed Teaching

Systematic observation, participation, and teaching under supervision in an affilied high school. Thirty clock hours of student teaching will usually earn one unit of edit, but the credit finally allowed will depend upon the nature and quality of the aching done. Any work below a C grade is unacceptable for credit in this course.

No student can enroll in this course until he has completed at least 5 units of work education.

During the semester in which the student takes his first assignment in student ching, he must meet with the college supervisor one hour each week for conference d discussion of problems encountered in his teaching.

Students who have had student teaching in preparation for the junior high school special secondary credentials should confer with their departmental and educational visers concerning partial fulfillment of this requirement as the result of having cometed the student teaching required for the credentials mentioned above.

Year course (3-3)

# ENGINEERING

## IN THE DIVISION OF PHYSICAL SCIENCES

*Majors* and *minors* are not offered in engineering. Students desiring major wor in this field should elect the *general major* with a concentration in engineering. Fo specific information, refer to the outline of the curriculum in general engineerin page 55, and page 20 for further information regarding the general major.

### Lower Division Courses

**1A-1B. Plane Surveying**

Use and adjustment of surveying instruments, computations and map-makin together with a study of land, topographic, city and mine surveying. Two instructio periods and one three-hour period for field work and mapping each week. Prerequisites Trigonometry and Mechanical Drawing, or equivalent, and sophomore standing.
Year course (3-3)

**2. Mechanical Drawing**

Freehand lettering, use and care of drafting equipment, simple orthographi projection, introduction to problems of dimensioning. Open to students lacking credi for a year course in senior high school mechanical drawing.
Fall or Spring (2)

**S3. Summer Class in Surveying**

Practical field problems in reconnaissance, triangulation, location and top graphic surveys. Observations for meridian, time and latitude. Precise work in linea and angular measurements. Development of self-reliance, accuracy, and professiona skill on the part of the student. Four weeks course held in the mountains near Sa Diego. For details regarding location of camp, date of registration, date of openin and other arrangements, a special announcement of the surveying camp may b secured at the Registrar's Office. Offered if demand is sufficient. Prerequisite: Surveying 1A-1B.
Summer (3)

**21. Descriptive Geometry**

Fundamental principles of descriptive geometry and their application to problems of engineering. Lectures and drafting. Prerequisites: One year of mechanica drawing, and sophomore standing.
Fall (3)

**22. Machine Drawing**

Design and drawing of simple machine parts with emphasis upon the production of standard drawings. Lectures and drafting. Prerequisite: Engineering 21 Mathematics 3A-3B.
Spring (3)

**23. Materials of Construction**

Manufacturing processes, structural properties and adaptability of the principa materials used in engineering. Lectures. Prerequisite: Sophomore standing.
Spring (2)

### Upper Division Courses

**100A-100B. Elements of Electrical Engineering**

Theory and characteristics of electrical equipment with emphasis on industria applications.

**100A. Direct current circuits, generators and motors.** Introduction to alternating current circuits.

**100B. Alternating current circuits, transformers, alternators, induction an synchronous motors, conversion apparatus and transmission lines**

Lectures and problems. Prerequisites: Mathematics 4A, Physics 1C or permissio of the instructor.
Year course (3-3)

### 1A. Electrical Engineering Laboratory

Laboratory determination of the characteristics of direct current machinery and rcuits, single phase alternating current circuits. One three-hour lab. and report per eek. Prerequisite: Engr. 100A (may be taken concurrently).
Fall (2)

### 1B. Electrical Engineering Laboratory

Laboratory determination of the characteristics of single phase and polyphase rcuits, machines, and related equipment. One three-hour laboratory period and report r week. Prerequisite: Engr. 100B (may be taken concurrently).
Spring (2)

### 2A-102B. Analytical Mechanics

Treatment of the fundamental principles of Newtonian mechanics. First semes- r: Study of the statics and kinematics of particles and rigid bodies. Second semester: udy of the dynamical principles underlying linear and rotary motion of rigid bodies, th additional work in elastic and inelastic impact. Use of elementary vector analysis solving engineering applications in mechanics. Prerequisites: Physics 1A-1B or -2B, and a working knowledge of the calculus. (Engineering 102A is a prerequisite r 102B.) Students with credit in Physics 105A-105B may not receive credit in this urse.
Year course (3-3)

### 4. Communications

An intensive study of the elements and systems used in radio and wire com- inication including: Circuit elements and resonant circuits, oscillators, modulators, tectors, wave radiation and propagation. Students with credit for Physics 104 may t receive credit for this course. Prerequisite: Physics 102.
Spring (2)

### 5. Hydraulics

A general course in hydraulics including the fundamental principles of hydro- atics and hydrodynamics applied to the flow of water through orifices, over weirs, rough pipes and canals. Lectures and problems. Prerequisites: Mathematics 4A, ysics 1C. Recommended: Physics 105A-105B.
Spring (3)

### 6. Hydraulics Laboratory

Laboratory determination of the characteristics of fluid flow and hydraulic equip- nt. Includes flow through pipes, orifices, weirs; characteristics of various types of mps. One three-hour lab. period and report per week. Prerequisite: Engr. 105 (may taken concurrently).
Spring (2)

### 2. Machine Design

A study of motions, velocities, and accelerations in linkages, cams, gears, and ated mechanisms. Designs of riveted and welded joints. Design of simple machine rts such as clutches, gears, and couplings. Two lectures, one three-hour drafting riod per week. Prerequisite: Physics 105A (may be taken concurrently), Engi- ering 22.
Fall (3)

### 4. Radio Measurements

A laboratory course on measurements of the parameters of resonant circuits at lio frequencies. Study of the properties of oscillators, modulators, detectors and ve guides. Prerequisite: Previous or concurrent enrollment in Engineering 104. idents with credit in Physics 124 may not receive credit for this course.
Spring (2)

### 3. Applied Engineering Thermodynamics

Principles of thermodynamics. Application of principles in study of combustion ocess, boiler, steam engines, turbines, auxiliary apparatus. Prerequisites: Math , Physics 1B.
Fall (3)

**129. Heat Power Laboratory**

Boiler testing and heat balance. Flue gas analysis, testing of steam powe equipment. One three-hour lab. and report per week. Prerequisite: Engr. 128 (ma be taken concurrently).
Fall (2)

**130. Route and Construction Surveying**

Application of surveying to engineering problems. Reconnaissance, preliminar location, and maintenance surveys for highways, railroads, and airfields. Constructio surveys for buildings and other structures. Earthwork computations. Two lecture and one three-hour field period per week. Prerequisites: Engr. 1B, Ast. 3.
Fall (3)

**131. Advanced Surveying**

Special problem in surveying. Methods of geodetic surveying; adjustment c observations, geodetic positions, map projections. Two lectures and one three-hou field period per week. Prerequisites: Engr. 1B, Ast. 3, recommended Engr. 130.
Fall (3)

**140. Strength of Materials**

Elastic and ultimate strengths of materials. Analyses of types of failure. Stres analysis and deformation of simple structural and machine members. Photoelasticit Lectures and problems. Prerequisite: Physics 105A.
Spring (3)

**141. Materials of Engineering Laboratory**

Theory and operation of testing machines and auxiliary apparatus. Standar tests to determine the significant characteristics of the commonly used engineerin materials. Heat treatment of metals. One laboratory period plus outside reading an report per week. Prerequisite: Engr. 140 (may be taken concurrently).
Spring (2)

**142. Stress Analysis**

Determination of stresses in simple framed structures such as roof trusses an highway bridges. Aircraft structures. Effects of combined stresses. Statically indeter minate beams. Special problems. Analytical and graphical methods of solution. Lecture and problems. Prerequisites: Physics 105A-B, Engr. 140.
Fall (3)

**145. Internal Combustion Engines**

Application of theory of thermodynamics to internal combustion engines. Essen tial features of design, operating characteristics, and application of gasoline, diesel, an gas engines, and the gas turbine. Lectures and problems. Prerequisites: Physics 1B Math. 4A. Recommended: Engr. 128.
Spring (3)

**150. Industrial Electronics**

The application of electron tubes in fields other than communications; considera tion of high power rectification, induction and dielectric heating, measurement an control systems. Prerequisite: Physics 102.
Fall (2)

**156. Aerodynamics**

Properties of air, air flow, air foils, drag, engines and propellers, aircraft perform ance and stability, types of aircraft, aircraft instruments. Lectures and problems. Pre requisites: Physics 105A-105B.
Spring (3)

**199. Senior Report**

Investigation of specific problems of advanced nature. Preparation of report. Pre requisite: Advanced senior standing.
Spring (2)

NOTE.—In laboratory courses special emphasis is placed upon the preparation o neat, concise, complete and intelligent reports.

# ENGLISH

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *liberal arts major* is offered in English. Lower division requirements: at least 5 units of work, including English 1, 6A-6B, and 56A-56B or 60A-60B. Upper division equirements: a minimum of 24 upper division units in English and comparative literture, selected with the approval of the departmental representative; 2 years of lower ivision work in a foreign language approved by the departmental representative or he equivalent reading knowledge determined by examination. Further work in the anguage, in upper division courses, is highly recommended.

A *teaching major* is offered in English for the general secondary credential or the eneral junior high school credential. For specific information, refer to the outlines of equirements for these credentials. English majors who have been admitted to candiacy for the general secondary credential may satisfy the foreign language requireient by one year of lower division foreign language, or equivalent, if 9 units of proessional education units have been completed.

### Minor

A *liberal arts minor* is offered in English. The minor must include at least 15 units f work in English, 9 units of which must be from courses carrying upper division redit.

A *teaching minor* is offered in English for the general secondary, the general unior high school, the special secondary, the general elementary, and the kindergartenrimary credential. For specific information, refer to the outlines of requirements for iese credentials.

### Comparative Literature

For courses in world literature, giving credit toward the English major or minor r toward the Comparative Literature minor, see Comparative Literature, page 95.

### Lower Division Courses

**English Fundamentals**

The elements of composition, including drill in grammar and usage; exercises in ocabulary building and in fundamental reading skills; theme writing. Credit in this ourse is equivalent to passing the English A examination and may be counted toward raduation as an elective but not to satisfy lower division English requirements in any urriculum.

Fall or Spring (2)

**Reading Clinic**

A semi-tutorial service offered by the English Department to those wishing to nprove reading ability. Open to all students at any level of college work. Consult epartment chairman.

Fall or Spring (0)

**Writing Laboratory**

A semi-tutorial service offered by the English Department to those wishing ssistance in writing projects, either remedial or advanced. Open to students at any vel of college work. Consult department chairman.

Fall or Spring (0)

**Freshman Composition** (formerly English 1B)

Study and practice in the expression of ideas and factual materials; principles of ganization and of effective style, with emphasis on exposition. Prerequisite: Satisfacry English A examination or credit in English A.

Fall or Spring (3)

**Freshman Literature** (formerly English 1C)

A course designed to develop college reading skills through practice in the analysis materials at varying levels of difficulty. Emphasis on the student's problems in readg rapidly and accurately mature books in literature, history, psychology, science, ilosophy, etc. Prerequisite: English 1.

Fall or Spring (3)

### 6A-6B. The Study of Literature

A basic course in the techniques of reading imaginative literature with sympath insight, and vividness. Methods of developing the informed and trained attention requ site to comprehension and appreciation of literary works, motion pictures, and rad presentations. Plays, stories, and poems contemporary or universal in appeal constitu the readings. Required of English majors; open to other students as an elective. Engli 6A is a prerequisite for 6B.

Fall and Spring (3-3)

### 8. English in Business

Theory and practice of business correspondence. Business letters as applied salesmanship; problems in writing credit and collection letters, applications f employment, adjustment letters, and sales letters. Prerequisite: English A or equiv lent, as indicated by Subject A Examination, or record from college. This course planned for students in the accounting and secretarial fields; units obtained in it cann be used to meet English requirements in other fields.

Fall or Spring (3)

### 10. Recreational Reading

Development of personal tastes for leisure-time reading through lectures and wri ten reports. May be taken a second time with new materials.

Fall or Spring (1)

### 50A-50B. Survey of American Literature

Semester I: Major American writers from the beginning to 1860. Semester II American literature from 1860 to the present.

Year course (3-3)

### 56A-56B. Survey of English Literature

The study of some important works of English literature from the Anglo-Sax period through the Victorian age, with emphasis upon the literary history of ea period.

Year course (3-3)

### 60A-60B. The Literary Personality

The first semester is devoted to two or three of the great creators of English a American literature; the second semester is devoted to Shakespeare. A study, in sever representative figures, of the way in which the issues of life are stated and resolved great literature; and of the interplay between dynamic forces within the writer ar the cultural world in which he lives. Special emphasis is laid on deriving, from marked different specific artistic creations, a generalized understanding of literature as a con plex language transcribing a great response to life. 60A is a prerequisite for 60B.

Year course (3-3)

### 61. Sophomore Composition

An elective course designed to give further training to the student who wish practice in writing beyond the freshman level. Prerequisites: English 1 and English or equivalent.

Fall (3)

### 62. The Short Story

A practical course in writing, including a study of short story techniques and pu poses, and the writing of complete short stories. Prerequisites: English 1 and Englis 2, or equivalent.

Spring (3)

### 63. Foundations of the Language

A study of the important features of English grammatical structure, with emph sis on present-day usage. Designed to make more significant the native languag through a study of the elements which compose it.

Spring (3)

## Upper Division Courses

**6. Creative Writing**

A writing workshop in which students are given opportunity to criticize each her's work. Emphasis on narrative and description, but freedom to pursue whatever riting forms may interest the student most. May be taken a second time with new aterial.

Fall (3) (Offered in 1949-1950 and alternate years)

**0. Recreational Reading**

An advanced course in the group reading of modern drama, poetry and fiction.

Fall or Spring (1)

**3. American English**

The development of American English; regional and cultural differences in pro- nciation, grammar, and vocabulary.

Fall (3) (Offered in 1949-1950 and alternate years)

**6A-116B. The Age of Elizabeth**

Semester I: Poetry and prose, exclusive of drama. Semester II: The drama to 42, excluding Shakespeare.

Year course (3-3)

**7A-117B. Shakespeare**

A chronological survey. The first semester gives special emphasis to the histories d chronicles; the second, to tragedy and the dramatic romances.

Year course (3-3)

**8A-118B. Eighteenth Century English Literature**

The first semester emphasizes the social satire of Swift, Pope, Addison, Steele, yden, Gay, Prior; and also the first stirrings of the romantic revolt in a number of portant poems and prose works. The second semester is devoted to Johnson and swell and their circle and to a significant romantic literature antedating the romantic tburst.

Year course (3-3)

**9A-119B. Nineteenth Century English Poetry**

Semester I: The culmination of the romantic movement in the poetry of Words- rth, Coleridge, Byron, Shelley, and Keats, in relation to the thought of the revolu- nary period. Semester II: Tennyson and Browning with their contemporaries d successors, relating English poetry to nineteenth century life and thought.

Year course (3-3)

**). The Age of Milton**

A study of the literature of the earlier seventeenth century, with emphasis on nson, Donne, and Milton. Consideration is given to the political, religious, and ial backgrounds of the seventeenth century.

Spring (3)

**A-126B. Nineteenth Century English Prose**

Semester I: Romantic and mid-Victorian prose writers, including Coleridge, zlitt, Lamb, DeQuincey, Carlyle, Landor, Macaulay, and Mill, related to the liter- , political, and social movements of the period. Semester II: Late nineteenth cen- y essays of Arnold, Thomas Huxley, Newman, Pater, Ruskin, and Stevenson. Study scientific, aesthetic, and ethical backgrounds.

Fall (3)

**. Contemporary British Literature**

Selected prose and poetry of England and Ireland from 1914 to the present, luding Shaw, Yeats, Synge, Joyce, Maugham, Huxley, D. H. Lawrence, Eliot, the ford poets, and the principal authors belonging to the two wars.

Spring (3)

**131. American Literature: 1820-1860**

The study of the important romantic writers, with emphasis on the New Engla group.

Fall (3)

**132. The Frontier and American Literature**

The influence of the frontier upon American literature studied through vari regions and movements. Examinations of source materials, biographies, and rep- sentative writers.

Fall or Spring (3)

**133. American Literature: 1860-1910**

The rise of realism in American literature. Influences, foreign and native, wh promoted the movement. Definition of realism. The literary creed of the realists. T romantic attack and the realist defense.

Spring (3)

**134. American Literature: 1910 to the Present**

Ideas and forms in representative poetry and prose.

Fall or Spring (3)

**135. American Colonial and Revolutionary Literature**

The Puritan system of thought and way of life, and the literary and intellect movements of the eighteenth century, studied in the works of such representat writers as Mather, Franklin, Paine, Freneau, and Brockden Brown.

Fall (3)

**143A-143B. The English Novel**

History of the English novel from the beginnings to the present. Extens reading of novels with reports, lectures, and discussions. The first semester covers t nineteenth century; the second semester deals with the more modern works.

Year course (3-3)

**149. The Study of Poetry**

A course proceeding from simpler to more complex poetic productions, a designed to bridge the widening chasm between the poet and the ordinary m Emphasis on current directions in poetry, and on poetry as an oral and auditory a

Spring (3)

**151. Chaucer**

A study of Chaucer's works, with emphasis on "The Canterbury Tales" a "Troilus and Criseyde."

Fall (3)

**166. Honors Course**

Type I: Special study. Open to members of the Honors Group in English (s page 15). May be repeated with different materials. Type II: Reading and discuss devoted to analyzing literature as an expression of a cultural field and to explori the values of literature in the studies of the life of man. Registration limited to maj and graduate students in English, and to majors in art, anthropology, economics, h tory, philosophy, political science, psychology, and sociology. Admission by consent the instructor.

Type I: Fall or Spring (3)
Type II: Year course (3-3)

**191. Advanced Composition**

A course designed for prospective teachers of secondary school English. This not a methods course, but a content course in grammar, composition, and journalis Required of all teaching majors in English; open to other students as an elective.

Fall (3)

### 2. The English Language

The study of the history of the English language, of its words and structure, the changes in inflections, pronunciation, vocabulary, and meaning, and of its use an instrument of communication and human living. Open only to seniors and aduate students.

Spring (3)

### 5. Literary Criticism

A historical survey of the principles and practices of literary criticism from eek times to the nineteenth century. Readings in the works of Aristotle, Horace, nginus, Sidney, Boileau, Dryden, Lessing, Sainte-Beuve, Coleridge, and Arnold. pen only to senior and graduate students.

Fall (3)

## Graduate Courses

### 1. Shakespeare

Bibliography, critical study, special problems, criticism. Prerequisite: Graduate nding. Recommended: At least one undergraduate course in Shakespeare.

Spring (2) (Offered in 1949-1950 and alternate years)

### 2. Mark Twain

Studies in the numerous aspects of Mark Twain's work and in his significance a product of the Frontier and as a representative American voice. Prerequisite: aduate standing.

Fall (2)

### 1. Regionalism in American Literature

Bibliography, special problems, with concentration on selected regions. Pre- quisite: Graduate standing. Recommended: At least one undergraduate course in erican literature.

Fall (2) (Offered in 1949-1950 and alternate years)

### 2. Utopias

A study of Utopian thought from a literary rather than a sociological viewpoint. mparative study of the forms of the projected ideal and of the satirical dream from to through Sir Thomas More, Shakespeare, Swift, Shelley, Morris, Wells, A. xley, and others. Prerequisite: Graduate standing.

Spring (2)

# FRENCH

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *liberal arts major* is offered in French. Lower division requirements: Frenc A-B-C-D; German A-B or Spanish A-B; History 4A-4B. Upper division requirements: A minimum of 24 upper division units, at least 21 units of which must be i French, including French 199. The remaining 3 units may be selected from Geograph 118; History 143, 121; or Comparative Literature 118, 155, or 158, in consultatio with the Chairman of the Department. An average of C grade or better is require in upper division major courses.

A *teaching major* is offered in French for the general junior high school credential. For specific information, refer to requirements for this credential.

### Minor

A *liberal arts minor* is offered in French. The minor must include at least 1 units of work in French, 9 units of which must be from courses carrying upper divisio credit.

A *teaching minor* is offered in French for the general secondary, the genera junior high school, the special secondary, the general elementary, and the kindergarten primary credential. For specific information, refer to the outlines of requirements fo these credentials.

### Lower Division Courses

**A-B. Elementary**

Intensive study of French grammar and syntax; daily written work discusse in class; class drill in conversational idiom and pronunciation; reading with ora discussion and résumés; dictation; introduction to contemporary prose writers Credit not given for French A unless followed by French B. Students who have ha one year of French in high school should register for French A for which only 2 unit will be allowed. Those who have had two years of French in high school shoul register for French B for which only four units will be allowed. For specific information, refer to page 17. French A, or its equivalent, is a prerequisite for French B.

Year course (5-5)

**C-D. Intermediate Reading**

Reading and composition; study of standard prose as a basis for class work collateral reading with résumés and written reports; dictation. Prerequisite for C French B or three years of high school French. Prerequisite for D: French C or fou years of high school French.

Year course (3-3)

**SC. Scientific Reading**

Reading taken from the fields of chemistry, physics, medicine, zoology, biology etc. Outside readings of books and periodicals, with written reports. Prerequisite French B or equivalent.

Fall (2)

### Upper Division Courses

**101A-101B. Conversation and Composition**

Translation into French from moderately difficult English prose. Outside readin of modern French prose, with written reports in French monthly. Readings and ora discussions in French of various facets of French life and culture.

Prerequisite: French D, or its equivalent, with grade of C.

Year course (3-3)

**105A-105B. Modern French Drama**

Plays of Victor Hugo, de Vigny, de Musset, Scribe, Augier, Dumas fils, Pailleron Brieux, Hervieu, Maeterlinck, Rostand, and others read and discussed as to subjec matter and technique. Outside reading and reports. Prerequisite: French D, or it equivalent, with grade of C.

Year course (3-3) (Offered in 1949-50)

**7A-107B. Eighteenth Century Literature**

The works of Montesquieu, Voltaire, Rousseau, the Encyclopédistes, and others. erequisite: French D, or its equivalent, with a grade of C.
Year course (3-3)

**0A-110B. Modern French Novel**

The French novel from Victor Hugo to the present day, including such authors : Hugo, Dumas, Stendhal, Balzac, Flaubert, Loti, Anatole France, Bourget, Bor- ux, Bazin, Barrès, Romain Rolland, A. Gide, Marcel Proust, and others. Class ding, outside reading, and reports. Prerequisite: French D, or its equivalent, with de of C.
Year course (3-3) (Offered in 1951-52)

**1A-111B. Seventeenth Century Dramatic Literature**

Reading in class of plays of Molière, Corneille, and Racine. Outside readings l lectures on the background of the seventeenth century in France. Prerequisite: ench D or its equivalent, with a grade of C.
Year course (3-3) (Offered in 1950-51)

**0. Comprehensive Reading and Survey Course**

Designed to fill up the gaps in the reading done in courses. Class meeting once veek for guidance, reports, and quizzes. Required of all seniors majoring in French.
Spring (3)

# GENERAL LANGUAGE

## IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in general language.

### Lower Division Course

**Latin and Greek Word Derivation**

A general and elementary course in philology. A study of Latin and Greek roots most frequent occurrence in English, and of the English words derived from them.
Fall (3)

**Language for Music and Speech Students**

Study of the pronunciation of French, German, and Italian for the use of gers, radio announcers, etc. No prerequisite. This course may be taken for one, o or three units of credit depending on the individual student's need. Credit in this rse does not count toward the 10 unit foreign language requirement.
Spring (1-3)

# GEOGRAPHY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *liberal arts major* is offered in geography. Lower division requirement Geography 1, 2, 3; Geology 1A--1B. Recommended: A reading knowledge of Frenc or German. Upper division requirements: a minimum of 24 upper division units i geography, or 18 units in geography and 6 units selected from related fields wit approval of the departmental representative.

A *teaching major* is not offered in geography; however, courses in geograph may be used as part of the *social science major* for the general junior high scho credential or the general secondary credential. For specific information, refer to th outlines for requirements for these credentials.

### Minor

A *liberal arts minor* is offered in geography. The minor must include at leas 15 units of work in geography, 9 units of which must be from courses carrying uppe division credit.

A *teaching minor* is not offered in geography for the general secondary credential however, it may be used as a part of the *social science minor* for the general junio high school, the special secondary, the general elementary, and the kindergarten-pr mary credentials. For specific information, refer to requirements for these credential

NOTE: Geography 1, 3, or 4 may not be used to meet any part of the 12-uni social science requirement. Geography 1 or 3 (but not both) may be used to meet par of the 12-unit natural science requirement.

### Lower Division Courses

**1. Introduction to Geography: Physical Elements**

The nature of maps, weather and climates of the world; natural vegetation land forms and their associated soils, with reference to their climatic relationships the seas and their coasts. One all-day field trip. This course is classified as a natura science. (See lower division requirements.)

Fall or Spring (3)

**2. Introduction to Geography: Natural and Cultural Regions**

The regional differentiation of the world by human activity; areal bases o economy and nationality. Prerequisite: Geography 1.

Fall and Spring (3)

**3. Elementary Meteorology**

An elementary study of the earth's atmosphere and changes in it which produc our weather and influence human affairs. Special attention given to local condition instruments, and records. Aeronautical meteorology stressed in the fall semeste This course is classified as a natural science. (See lower division requirements.)

Fall or Spring (3)

**4. Map Reading and Map Interpretation**

Representation of geographic data by means of maps. Interpretation of projec tions, scales, symbols, land forms, and culture from topographic maps; measurement of cultural data on maps. This course may not be counted toward lower division socia science requirement.

Fall (2)

**10. Economic Geography**

Beginning course in economic geography designed for commerce and economi majors. Prerequisite: Geography 1.

Fall or Spring (3)

## Upper Division Courses

### 2. Geography of California

The physiographic regions of California and the cultural landscapes developed the successive cultural groups. Prerequisite: Geography 1 or consent of instructor.

Spring (3)

### 3. Climatology

A survey of the principal classifications of climates of the world; regional aracteristics of climate; relations to soils, vegetation, and human activities. Prequisite: Geography 1 or consent of instructor.

Fall (3)

### 6. Geography of Latin America

The natural regions of Latin America; their occupational condition and historical olution. Prerequisite: Geography 1 or consent of instructor.

Fall (3)

### 7. Geography of Northern and Eastern Europe

A study of the cultural development of the countries of northern and eastern rope in relation to physical background and historical evolution. Prerequisite: eography 1 or consent of instructor.

Fall (3)

### 8. Geography of the Mediterranean Area

A study of the cultural development of the countries of Southern Europe, Western sia, and North Africa in relation to physical background and resources. Prerequisite: eography 1 or consent of instructor.

Spring (3)

### 1. Geography of North America

The natural regions of North America, their formation and economic and storical development. Prerequisite: Geography 1 or consent of instructor.

Spring (3)

### 14. Geography of Asia

The cultural regions of Asia, their physical environment, and historical development. Prerequisite: Geography 1 or consent of instructor.

Fall (3)

### 15. Geography of the San Diego Area

Directed individual urban and rural field work in the San Diego area; the pping of a small area and making its geographic interpretations. Prerequisites: ography 1 and 2 or consent of instructor.

Spring (3)

### 11. Advanced Economic Geography

A survey of the raw materials of world trade; their production and distribution related to major geographic regions of the world. Prerequisite: Geography 1 or sent of instructor.

Fall (3)

### 13. Political Geography

A survey of the geographic bases of national power; geographic aspects of intertional problems; theories of leading political geographers. Prerequisite: Geography r consent of instructor.

Spring (3)

### 1. Honors Course

To be arranged after consultation with the chairman of the department. (See ge 15)

Fall or Spring (Credit to be arranged)

# GEOLOGY

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *liberal arts major* is not offered in geology. Students preparing for later professional training in geology should plan on completing Chemistry 1A-1B; Physic 1A-1B-1C-1D; Mathematics 3A-3B; Engineering 1A-1B, 21A; and Geology 1A-1B 21A-21B.

A *teaching major* is not offered in geology; however, courses in this field may b used as part of the *general science major* for the general junior high school credential For specific information, refer to the outline of requirements for this credential.

### Minor

A *liberal arts minor* is offered in geology. The minor must include at least 1 units of work in geology, 9 units of which must be from courses carrying upper divisio credit.

A *teaching minor* is not offered in geology; however, courses in this field may b used as part of the *general science minor* for the general junior high school, the specia secondary, the general elementary, and the kindergarten-primary credentials. Fo specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A. Physical**

The composition, origin, and distribution of earth materials, and their modification through mechanical and chemical process of change. Three lectures and on three-hour laboratory period weekly with related field study during the semester. (No open to students who have had Geology 2A except for one unit upon the completion o the laboratory section.)

Fall (4)

**1B. Historical**

Theories of earth origin, and the evolutionary history of the earth as trace through rock and fossil records. Consideration of the Paleontologic Sequence. Thre lectures and one three-hour laboratory period weekly, with arrangement for field stud and conference during the semester. Prerequisite: Geology 1A or equivalent.

Spring (4)

**2A. General**

Similar to Geology 1A but without laboratory. Emphasis upon origin an development of earth's surface features. Open to all students except those alread presenting credit in Geology 1A. Two lectures and one demonstration and discussio hour weekly.

Fall (3)

**2B. Physiography of United States**

A study of the land forms of the United States and their physiographic history a illustrative of universal geologic conditions. Two lectures and one discussion hou weekly. Prerequisite: Geology 1A or 2A.

Spring (3)

**21A-21B. Mineralogy**

Study of the common minerals and rocks. Use of the blowpipe, simple chemica reagents, and the petrographic microscope, but with emphasis upon sight determination Prerequisite: Geology 1A and high school chemistry, or equivalents.

Year course (3-3)

### Upper Division Courses

**100. Structural Geology**

The evolution and description of the structural and topographical features of the earth. Faulting, folding, and orogenic forces with practical illustrations from the North American Continent and California geologic conditions. Lectures, discussions, and occasional field trips. Prerequisite: Geology 1A-1B or 2A-2B.

Fall (3)

### 01. Museum Work

Selection and preparation of materials for the college museum collections. mphasis upon creation of self instructive displays for use on the elementary and condary as well as the collegiate level. Prerequisite: Geology 1A-1B, and consent of e instructor.

Fall or Spring (1 to 2)

### 2. Geology of California

Directed reading and group discussion of California geologic literature. Designed acquaint the student not only with the important structural and geomorphic units the State but with the variety of important source materials of geologic literature well. Use of bibliographies, state and federal surveys, research publications, etc. rerequisite: Geology 1A-1B, and consent of the instructor.

Spring (2)

### 8. Field Geology

Field instruction in geologic methods. Reconnaissance of adjacent unmapped eas with preparation of a geologic map and accompanying report. Work accom- ished primarily on week-ends with minimum classroom activity during the week r organizational details. Prerequisite: Geology 1A-1B, and consent of the instructor.

Fall or Spring (1 to 4)

### 9. Special Study

Individual work in field, library, laboratory, or museum under staff supervision. pen only to qualified students upon consultation.

Fall or Spring (1 or 2)

# GERMAN

## IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in German; however, students desiring to carry advanced work in German should consult with the Chairman of the Department of Foreign Languages.

### Lower Division Courses

**A-B. Elementary**

Pronunciation, reading and grammar, with practice in simple conversation, narration and description, both oral and written. Credit not given for German A unless followed by German B. Students who have had one year of German in high school should register for German A for which only two units will be allowed. Those who have had two years of German in high school should register for German B for which only four units will be allowed. For specific information, refer to page 17. German A, or its equivalent, is a prerequisite for German B.

Year course (5-5)

**C-D. Intermediate Review and Reading**

Reading and composition; study of standard prose as basis for class work; collateral reading with written reports; German conversation, with the texts read as a basis; dictation. Prerequisite: German B or three years of high school German, or its equivalent. Students with credit for four years high school German, or its equivalent, should enter German D.

Year course (3-3)

**SC-SD. Scientific Reading**

First semester, readings in scientific reader on chemistry, physics, etc.; occasional written reports on scientific subjects read outside of class; sight reading. Second semester, readings in special scientific or technical works; weekly written reports required; sight reading. Prerequisite for SC: German B with a grade of C or three years of high school German; for SD: German SC, German C, with a grade of C, or four years of high school German.

Year course (3-3) (Offered 1949-50)

### Upper Division

**101A-101B. Advanced Conversation and Composition**

Translation into German of moderately difficult English prose. Free composition in German, written and oral. Outside reading of modern German plays and prose, dealing with various aspects of German life and culture, with written reports and oral discussions in German. Oral and written practice in conversational German. Prerequisite: German D, or equivalent, with grade of C.

Year course (3-3)

# HEALTH EDUCATION

## IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

*Major* work is not offered in health education.

### Minor

A *liberal arts minor* is offered in health education. The minor must include at least 15 units of work, 9 units of which must be from courses carrying upper division credit. The minor must include the following courses: Physical Education 51, Home Arts 61A, Health Education 65, 152, 153, and 199.

A *teaching minor* is offered in health education for the general secondary, the general junior high school, and the special secondary credentials. Physical education majors may use health education as a second teaching minor only. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**21. Principles of Healthful Living**

A course concerned with the personal health problems of college students; designed to provide scientific health information; promote wholesome attitudes and practices relating to healthful living. Required of all freshmen.

Fall or Spring (2)

**65. Community Health**

A study of community health problems; the role of the citizen, the public and private (or voluntary) agencies in promoting and protecting the health of the community. Prerequisite: Health Education 21. Required of physical education major students.

Fall (3)

**90. Physiology of Reproduction**

A course consisting of a series of lectures and discussions dealing with normal and abnormal physiology and anatomy of reproduction; facts and frauds in sex hygiene, and related topics. Prerequisite: Health Education 21.

Fall or Spring (1)

### Upper Division Courses

**151. Health Education for Teachers**

A course for teacher education students designed to develop a teacher awareness of pupil health needs. The elements of the health education program are considered, emphasizing the responsibility of the teacher in health guidance; observation of school children; techniques and procedures for screening defects; promoting health instruction; and providing a safe, sanitary, healthful school environment. A study of the community agencies promoting the health and welfare of the school child.

Fall or Spring (2)

**152. Health Education Programs**

The construction of the health education program including objectives, scope and sequence of instruction, teaching methods, source materials and evaluation procedures; with practice in building functional instructional units. Prerequisite: Health Education 151.

Fall (3)

**153. Administration of School Health Program**

The principles, policies and practices in organizing and conducting the school health program as an integral part of the total school and community program. A study of the administrative aspects of the divisions of the school health program; health nstruction, health service (including health guidance), healthful school living, and elationship to physical education and recreation. Partially fulfills Health and Development Credential requirement for nurses.

Spring (3)

### 199. Special Study in Health

An opportunity is presented for extensive review of pertinent literature, individual research, and advanced study of problems in the profession. Credit will range from 1 to 3 units according to the type and amount of work. Prerequisite: Approval of the Chairman of the Division.

Fall or Spring (1 to 3)

## Graduate Courses

### 202. Problems in Health Education

A survey of current problems facing the Health Education profession is studied through a review of the literature, discussion of trends, observation of school situations together with the analysis and evaluation of actual problems. Written reports are required. Prerequisite: Graduate standing.

Fall or Spring (2)

# HISTORY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *liberal arts major* is offered in history. Lower division preparation for the major: History 4A-4B, or 8A-8B, or 9A-9B, and either Political Science 1A-1B, or 71A-71B, or Economics 1A-1B. Two of the above history courses are recommended for students planning to major in history, and it is suggested that History 4A-4B be included as one of the courses. Upper division requirements: a minimum of 24 upper division units in history, including History 199, and a minimum of a year of concentration in each of three of the following fields: (a) Ancient and Medieval; (b) Modern Europe; (c) United States; (d) Latin America; (e) Pacific Area and the Far East. These courses must be selected under the guidance of the chairman of the department. A reading knowledge of one foreign language is strongly recommended.

A *teaching major* is offered in history for the general secondary credential. History may also be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *liberal arts minor* is offered in history. The minor includes from 15 to 18 units of work in history, 9 units of which must be from courses carrying upper division credit ncluding a year course.

A *teaching minor* is offered in history for the general secondary credential or as part of the *social science minor* for the general junior high school, the special secondary, he general elementary, and the kindergarten-primary credentials. For specific infornation, refer to the outlines of requirements for these credentials.

NOTE: History 17A-17B does not count toward credit for a major or minor in istory.

Any history course, with the exception of History 270A-270B, may be taken either emester, the A part without the B part, or vice versa.

### Lower Division Courses

**A-4B. History of Modern Europe**

A survey of European society, institutions and politics from about 1500 to the resent. Fall semester: 1500-1799. Spring semester: 1799 to the present.

Year course (3-3)

**A-8B. History of the Americas**

Survey of the history of the western hemisphere from its discovery to the present ime.

Year course (3-3)

**A-9B. History of the Pacific Ocean Area**

A general survey of the history and civilization of the peoples of the Pacific, with pecial emphasis upon exploration, trade, international rivalries, and social evolution f the island areas.

Year course (3-3)

**7A-17B. History of American Civilization**

Survey of the political and social development of the United States, with emphasis pon the rise of American civilization and ideals.

NOTE: This course is not open to freshmen.

Year course (3-3)

### Upper Division Courses

**11A-111B. Ancient History**

Fall semester: Greek history to the Roman conquest. Spring semester: Roman istory to the fourth century A.D.

Year course (3-3)

**21A-121B. Medieval History**

Survey of the main events of European social, cultural, religious, political and conomic history, between 500 and 1300 A.D.

Year course (3-3)

**131A-131B. Renaissance, Reformation and Counter-reformation**

A history of personalities and events connected with the social, political, cultural economic and religious change between 1300 and 1600.

Year course (3-3)

**141. Europe in the Seventeenth and Eighteenth Centuries**

European thought, politics and international relations from the Thirty Years War and Louis XIV to the Seven Years' War.

Fall (3)

**142. The French Revolution and Napoleonic Era**

Study of conditions in France prior to 1789, the Revolution, 1789-1799, the organization of France and Europe under Napoleon, character of his empire, and the reorganization of Europe at the Congress of Vienna.

Spring (3)

**143A-143B. Europe in the Nineteenth Century**

Reaction in Europe, the development of nationalism, the impact of industrialism and the background of World War I. Covers period 1815-1914.

Year course (3-3)

**144A-144B. Europe and the World Wars**

Developments in Europe from 1914 to the present. Fall semester: 1914-1939 Spring semester: 1939 to present.

Year course (3-3)

**151A-151B. History of England**

A survey of political and constitutional development in England since 1066; the transition from medieval England to modern; Tudor despotism; struggle for self government under the Stuarts; rise and development of present-day political and socia institutions. This course is designed for pre-legal students, majors in English, and as background for American history.

Year course (3-3)

**156A-156B. History of British Expansion**

A study of the growth, development, and break-up of the older overseas empire the beginnings of the newer empire after 1783; the rise, federation, and imperial relations of the British Commonwealth of Nations; the crown colony system; India under British rule; British expansion in Africa and the Pacific; development of the British mandates. History 156B is not open to students with credit for Political Science 160.

Year course (3-3)

**161. Mexico and Caribbean Countries**

Special attention to relations between the United States and these countries, and to recent developments in Mexico.

Fall (3)

**162. South America Since Independence**

Republics of South America. Development of nationality, struggles for political stability, exploitation, diplomatic and commercial relations with the United States, and other international problems of South America. Survey of present-day conditions.

Spring (3)

**171A-171B. The Rise of the American Nation**

Semester I: Lectures and readings on English colonization in North America, the development of colonial institutions and political customs, and areas of international conflict during the eighteenth century. Semester II: The revolutionary movement and the establishment of the government under the Constitution of 1787 to the close of the War of 1812.

Year course (3-3)

**172A-172B. Constitutional History of the United States**

Colonial governments, formation of the national Constitution, historical development of constitutional government, and significant phases of American constitutional law. Not open to students with credit for Political Science 139A and 139B.

Year course (3-3)

### 173A-173B. The Expansion of the United States

Lectures and readings on Jacksonian democracy, territorial expansion and the Mexican War, the slavery controversy, Civil War and Reconstruction, and attention to the growth and progress of the United States to the close of the nineteenth century.
Year course (3-3)

### 175. The United States in the Twentieth Century

The rise of the United States to the position of a world power; social and economic problems posed by the machine age; political action and adjustment, actual and proposed, intended as solutions for these problems.
Spring (3)

### 176A-176B. History of American Foreign Policy

Lectures and readings in the field of American foreign relations since 1776, with special emphasis, in the second semester, upon affairs since 1900. A general survey course. Not open to students with credit for Political Science 158A-158B.
Year course (3-3)

### 179A-179B. Intellectual History of the American People

A study of the ebb and flow of ideas in the United States since the founding of the English colonies, with special attention devoted to social and political thought.
Year course (3-3)

### 181A-181B. History of the West

The American frontier: Expansion, exploration, settlement and building of the new states, with emphasis upon frontier problems of defense, communications, finance, etc.; the development of cultural institutions. A critical examination of the causes, effects and results of the frontier experiences of the American people. Second semester deals chiefly with the Far West and its political influence upon the American people. Frontier influences on American ideals and politics.
Year course (3-3)

### 191A-191B. History of the Far East

Particular emphasis during the first semester upon the history, both internal and international, of the Far East through the nineteenth century. The second semester will be devoted to a consideration of developments in the twentieth century.
Year course (3-3)

### 192. Modern Russia

A general survey of Russian history, with emphasis upon the period since Peter the Great; the relations between the Russian Empire and its national minorities; Tsarist experiments in political and social reform; the rise and spread of revolutionary socialism; the collapse of the Russian Empire; the development of the U. S. S. R.
Spring (3)

### 193. History of China

A survey of Chinese history and institutions from antiquity to the present.
Fall (3)

### 194. History of Japan

A general survey of the political, economic and social development from the foundation of the empire to contemporary times. Special attention will be given to religions, phliosophy, literature and the arts.
Fall (3)

### 199. Special Course for Advanced Students

Required of all students with a history major in liberal arts and those working toward a General Secondary credential with a history major. To be attended during the senior year.
Spring (2)

## Graduate Course

### 270A-270B. Seminar

Required of all candidates for a General Secondary credential with history as he major. Special emphasis upon the application of research in American history to eaching in junior high school, high school, and junior college. History 270A is a preequisite to 270B. Prerequisite: Graduate standing.
Year course (2-2)

# HOME ARTS

## IN THE DIVISION OF SOCIAL SCIENCES

*Majors* and *minors* are not offered in home arts. Students desiring major wor in home arts at this college should plan for a *general major* with the field of conce tration in home arts. For specific information on the home arts curriculum, refer page 59 and for further information on the general major, refer to page 20.

NOTE: Courses in home arts may not be used to meet any part of the 12-un social science requirement, nor may they be used as part of a social science major minor.

### Lower Division Courses

**1. General Home Arts**

Consideration of necessary preparation for marriage, family budgets and mon management; recreation, entertaining and social usage; finding a home, its furnishin and equipment with consideration of arrangement and care; child care, proper traini and guidance. Open to men and women.

Fall or Spring (3)

**5. Food Preparation**

Principles of food selection, preparation and service with consideration aesthetic and nutritional values. Experience in food preparation and meal servic One lecture and two three-hour laboratories per week.

Fall (3)

**10. Fundamentals of Clothing**

Selection of clothing with self-analysis as a basis; wardrobe planning and buyi procedures. A study of commercial patterns and principles of garment constructio Two three-hour laboratories per week.

Fall (2)

**61A. Nutrition**

Practical problems of nutrition including food requirements, food selection, a food habits. For men and women. One two-hour lecture per week.

Spring (2)

**61B. Nutrition Laboratory**

Nutrition principles applied to food preparation, meal preparation, and speci diets. One three-hour laboratory per week.

Spring (1)

### Upper Division Courses

**101. Clothing Selection**

Aims to develop taste in dress through a better understanding of the relation art principles, psychology, fashion trends, personality and physical characteristics individuals. History of costume is studied briefly as an aid in understanding recurri cycles in fashion. A consideration of buymanship information necessary in wardro selection to insure satisfaction and economy.

Spring (3)

**105. Family Meals**

This course deals with the planning, preparing, and serving of attractive, wel balanced meals for different income levels, and for various occasions. The student wi have responsibility for menu making, food purchasing, and meal management. Tw three-hour laboratories, one hour lecture per week.

Fall (3)

**160A. Merchandise Analysis—Textiles**

Properties, uses, selection and care of textile fibers and fabrics. The aim is develop judgment in the evaluation involved in the selection of textiles.

Fall (2)

**160B. Merchandise Analysis—Nontextiles**

Properties, uses, selection and care of metals, glass, rubber, fur, enamels a plastics.

Spring (2)

# INDUSTRIAL ARTS

## IN THE DIVISION OF PHYSICAL SCIENCES

*Major* and *minor* work are not offered in industrial arts. Courses in this field nay not be used to satisfy any part of the lower division requirements in natural science nor may they be used as part of major work in physical science.

### Lower Division Courses

**1. General Shop Theory and Practice**

A study of shop practices in the processing and fabrication of various engineering naterials. Students investigate standard tools and equipment used in modern technology and learn how to obtain data from tables and formulas necessary to successful hop work.
Fall (3)

**1. Introductory General Shop**

A general introductory shop course covering the areas of wood, machine and ench metal, sheet metal, foundry, forge, welding, and electricity. Basic elements of he above areas will be mastered during the first half of the semester with special onsideration given to individual interests and needs during the second half.
Fall or Spring (3)

# JOURNALISM

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *liberal arts major* is not offered in journalism. Students desiring major work 1 journalism at this college should plan for a *general major* with the field of concenration in journalism. For specific information regarding this plan, refer to the curriclum in pre-journalism, page 61, and to the description for the general major, page 20.

### Minor

A *liberal arts minor* is offered in journalism. The minor must include at least 5 units of work in journalism, 9 units of which must be from courses carrying upper ivision credit.

A *teaching minor* is not offered in journalism.

### Lower Division Courses

**1A-51B. News Gathering and Reporting**

Study of news sources and types; practice in news and feature writing; newsaper organization; excursions and special lectures. Prerequisite: Sophomore standing. 1A is prerequisite for 51B.
Year course (3-3)

### Upper Division Courses

**1. Feature Writing**

Study and practice in writing special articles for newspapers, general circulation agazines and nontechnical trade magazines. Frequent written assignments.
Spring (3) (Offered in 1949-50 and alternate years)

**2. Editorial Writing**

Study and practice in writing effective presentation of opinion for publication. xtensive practice in this form of writing. Prerequisite: Journalism 51A-51B.
Spring (3)

**3. Editing and Copyreading**

A laboratory course in the final preparation of copy for publication, making up e newspaper and use of photographic art. Prerequisite: Journalism 51A-51B.
Fall (3)

# LATIN

## IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in Latin.

### Lower Division Courses

**A-B. Elementary**

Thorough study of Latin grammar with daily written exercises and the transl
tion of selected passages from Caesar, Cicero, and Pliny. The importance of the
authors and their culture to western civilization will be considered. Students who ha
had one year of Latin in high school should register for Latin A for which only 2 uni
will be allowed. Those who have had two years of Latin in high school should regist
for Latin B for which only 4 units will be allowed. For specific information, refer
page 17. Latin A, or its equivalent, is a prerequisite for Latin B.

Year course (5-5)

**C-D. Intermediate**

Survey of Latin poetry with chief emphasis upon Vergil's *Aeneid*. Selectio
will be read from Catullus, Horace, Ovid, and others. Parallel European poetry will
considered. Latin B or equivalent is a prerequisite for Latin C. Latin C or equivalent
a prerequisite for Latin D.

Year course (3-3)

# LIBRARY SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

*Major* and *minor* work are not offered in library science.

NOTE: Library science may not be used to satisfy any part of the 12-uni
social science requirement, nor may it be used as part of a social science major o
minor.

### Lower Division Courses

**10. Use of the Library**

The chief object is to give a working knowledge of some of the resources of th
library which every teacher and student should understand—the decimal classifica
tion, the card catalog, periodical indexes, and the most important reference book
together with some instruction in the preparation of bibliographies. The course wi
be a requirement of those students added to the library's staff of student assistant
although it will not prepare the student to become a librarian.

Fall or Spring (2)

# MATHEMATICS

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *liberal arts major* is offered in mathematics. Lower division requirements: Mathematics 3A-3B, 4A. Recommended: Two or more of the following: Astronomy 1; Economics 1A-1B; Commerce 2, Engineering 1A, 21; French A-B; German A-B; Physics 1A-1B or 2A-2B-3A-3B. Upper division requirements: a minimum of 24 upper division units in mathematics, or 18 units in mathematics and 6 units selected from the following with approval of the Chairman of the Department: Astronomy 107; Chemistry 111A-111B, 144; Physics 105A-105B, 112; or other courses approved by the Chairman of the Department.

A *teaching major* is offered in mathematics for the general junior high school credential. For specific information, refer to the outline of requirements for this credential.

### Minor

A *liberal arts minor* is offered in mathematics. The minor must include at least 15 units of work in mathematics, 9 units of which must be from courses carrying upper division credit selected from the following: Mathematics 101, 102, 104, 105, 106, 111, 117, 119, 140.

A *teaching minor* is offered in mathematics for the general secondary, the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

NOTE: Courses in mathematics may not be used to meet any part of the 12-unit natural science requirement.

### Lower Division Courses

**A-B. Basic Mathematics**

A year course roughly equivalent to the two-year sequence in algebra and geometry as given in the high school. More time is given to arithmetic and numerical trigonometry and less to demonstrative geometry.

Year course (3-3)

**C. Intermediate Algebra**

The course begins with an extensive review of elementary algebra. Topics covered include quadratic equations, simultaneous equations, ratio and proportion, variation, arithmetic and geometric progressions, bionominal expansion and logarithms. It is equivalent to the second year-course in high school algebra. Prerequisites: Elementary algebra and geometry or Mathematics A-B.

Fall and Spring (3)

**D. Trigonometry**

Roughly equivalent to the high school course in plane trigonometry but with more attention than is often given to those aspects needed in analytic geometry and calculus. Prerequisites: Intermediate algebra, Mathematics C.

Fall and Spring (3)

**E. Solid Geometry**

A course in intuitive solid geometry with much attention to the calculation of surfaces and volumes for the simpler solids and for certain others used in industry. Prerequisites: Intermediate algebra, Mathematics C.

Fall (2)

**S. Slide Rule**

Theory and use of the slide rule. Practice in performing the fundamental operations of arithmetic. Some attention is given to more involved computations. Prerequisites: Trigonometry, Math. D.

Fall and Spring (1)

### 1. College Algebra

Review of algebra and trigonometry. New material includes identities, graph solution of algebraic and trigonometric equations, determinants, and mathematica proofs. Prerequisites: Two years of algebra and trigonometry.

Fall and Spring (3)

### 3A. Plane Analytic Geometry

Equations and loci, conic sections, coordinate transformations, cartesian an polar coordinates, and parametric representation. Prerequisites: Algebra, plan geometry, intermediate algebra, and plane trigonometry, with a high degree of pr ficiency, or a satisfactory grade in Mathematics 1, College Algebra. In order t determine the degree of proficiency, examinations in intermediate algebra and plan trigonometry will be given during the first week of the semester. Students falling belo the required standard will be assigned to Mathematics 1.

Fall and Spring (3)

### 3B. First Course in Calculus

Introduction to differential and integral calculus, with applications to problem involving variable rates and summations. Prerequisite: Mathematics 3A.

Spring (3)

### 4A. Second Course in Calculus

Differentiation, integration, infinite series, and a brief treatment of solid analyti geometry. Prerequisite: Mathematics 3B. Solid geometry is recommended.

Fall (3)

### 4B. Third Course in Calculus

Partial differentiation, successive integration, and applications. Prerequisite Mathematics 4A.

Spring (3)

### 7A-7B. Mathematical Analysis

Designed for students who do not intend to prepare for a professional career i physical science or in engineering but who desire or need one year of college mathe matics. Consideration is given to the processes and applications of algebra, trigo nometry, and differential and integral calculus. Prerequisites: High school algebr and plane geometry. 7A is a prerequisite to 7B. Students who have had Math 1 or 3 may not enroll in this course for credit.

Year course (3-3)

## Upper Division Courses

### 101. Elementary Geometry for Advanced Students

Non-Euclidean geometry, transformations, constructions with ruler and com passes, and famous problems. Prerequisite: Mathematics 4A or 7B.

Fall (3) (Offered 1948-49 and alternate years)

### 102. Elementary Algebra for Advanced Students

The number system, simultaneous equations, calculation of logarithms, and othe topics related to the elementary field. Prerequisite: Mathematics 4A or 7B.

Spring (3) (Offered 1948-49 and alternate years)

### 104. History of Mathematics

History of mathematics down to early modern times. Prerequisite: Mathematic 3A-3B or 7B.

Fall (3) (Offered in 1947-48 and alternate years)

### 105. College Geometry

A continuation of the geometry of the high school with emphasis on modern topics. Prerequisite: Mathematics 3B or 7B.

Fall (3) (Offered 1948-49 and alternate years)

### 106. Projective Geometry

Concurrence of lines, collinearity of points and other properties of figures not altered by projections; construction and study of ellipses, hyperbolas and parabolas by means of projections. Prerequisite: Mathematics 3A-3B or 7B.
Fall (3) (Offered in 1947-48 and alternate years)

### 111. Theory of Algebraic Equations

Determinants, complex numbers, and theory of algebraic equations. Prerequisites: Mathematics 3A and 3B or 7B.
Spring (3) (Offered in 1948-49 and alternate years)

### 112. Analytic Geometry of Space

The coordinate systems in space; lines, planes, and quadric surfaces; applications. Prerequisite: Mathematics 4A.
Spring (3) (Offered 1948-49 and alternate years)

### 117. Intermediate Calculus

Essentially the same as Mathematics 4B with additional special work for advanced students. Prerequisite: Mathematics 4A. Credit not allowed for both 4B and 117.
Spring (3)

### 118. Advanced Mathematics for Engineering Students

Hyperbolic, elliptic, Bessel and gamma functions; line integrals; Fourier series, etc. Applications. Prerequisites: Mathematics 4A-4B. (4B concurrently if desired).
Fall (3)

### 119. Differential Equations

Ordinary differential equations of first and second order, with applications. Prerequisite: Mathematics 4A-4B (4B concurrently if desired).
Spring (3)

### 124. Vector Analysis

Theory and applications to engineering problems. Prerequisites: Mathematics 4A-4B (4B concurrently if desired).
Fall (3)

### 140. Probability and Statistics

Statistical theory and method from the mathematical standpoint; applications in social and natural science. Prerequisite: Mathematics 4A or 7B.
Spring (3) (Offered in 1948-49 and alternate years)

### 199. Special Study

Study of materials mainly supplementary to the courses listed above. Prerequisite: Average grade of B or better in at least 12 units beginning with Mathematics 3A.
Fall and Spring (1 or 2, each semester)

# MUSIC

## IN THE DIVISION OF FINE ARTS

### Major

A *liberal arts major* is offered in music. Lower division requirements: Music 1B-1C-1D, 4A-4B, 4 units of applied music (study of piano, voice, or orchestral instrument); Aesthetics 1A-1B. Upper division requirements: a minimum of 24 upper division units in music selected from the following: Music 105A-105B, 106, 107, 119A, 120A, 121A-121B, 128; 4 units of applied music, Aesthetics 102A-102B, and 4 units of music activity (Music 111, 112, 113, 115, 126, or 130). As laboratory work, each music major is required to carry one music activity per semester. It is recommended that both vocal and instrumental activities be included at some time during the college course. At least a C average in upper division music courses is necessary.

At least two months before graduation, each senior music major will present a recital before the music faculty. At this time, the faculty will select those students who are to be granted he privilege of a public recital.

A *teaching major* is offered in music for the general secondary credential and the special secondary credential in music. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *liberal arts minor* is offered in music. The minor must include at least 15 units of work in music, 9 units of which must be from courses carrying upper division credit

A *teaching minor* is offered in music for the general secondary, the general junior high school, and the special secondary credentials. It may be offered only as a second teaching minor for the general elementary and the kindergarten-primary credentials. For specific information, refer to the outlines of the requirements for these credentials.

### Lower Division Courses

(Descriptions of courses in the field of music appreciation and history of music are listed under *aesthetics.*)

**1A. Musicianship—Fundamentals of Music**

The elements of music; scale construction; elementary music theory; drill in music reading both with syllables and with words; ear training, elementary music dictation. Basic course for all general elementary credential students. Music majors receive no credit toward the major. All music majors are required to register for Section 1, only.

Fall or Spring (3)

**1B. Musicianship—Music Reading and Ear Training**

Tonal and rhythmic dictation; rhythmic writing; sight singing. Basic course for majors and minors. Text—Smith and Krone: Fundamentals of Musicianship Book I. Prerequisite: Music 1A.

Fall or Spring (2)

**1C-1D. Musicianship—Advanced Music Reading and Ear Training**

Tonal work in minor keys; modal scales; dissonant triads and seventh chords; interval feeling in all chords; rhythmic progression and elementary forms; rhythmic, melodic and harmonic dictation. Prerequisite: Music 1B. 1C is a prerequisite for 1D.

Year course (2-2)

**2A. String Instruments**

Beginner's class in violin, viola, 'cello and string bass. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

Fall or Spring (1)

**3A. Woodwind Instruments**

Beginner's class in oboe, clarinet, flute and bassoon. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

Fall or Spring (1)

**4A-4B. Elementary Harmony**

Scale construction, intervals, by-tones and diatonic harmonies. Transposition and original composition in the simpler forms. Text—Alchin: Applied Harmony Vol. I. Prerequisites: Music 1A-1B, or the equivalent, and at least one year of piano study. 4A is a prerequisite for 4B.
Year course (3-3)

**6A. Brass Instruments**

Beginner's class in trumpet, French horn, baritone, trombone and tuba. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.
Fall or Spring (1)

**7A. Music Materials for the Elementary School**

Study of the song material in the state music texts and in the supplementary texts. Appreciation materials applicable to the elementary school. Required course for all general elementary credential students. Prerequisite: Music 1A.
Fall, Spring and Summer I, II (3)

**11A-B-C-D. Women's Glee Club—Treble Clef**

Entrance upon examination.
Fall and Spring ($\frac{1}{2}$-$\frac{1}{2}$)

**12A-B-C-D. Men's Glee Club**

Entrance upon examination.
Fall and Spring ($\frac{1}{2}$-$\frac{1}{2}$)

**13A-B-C-D. Orchestra**

Permission of the conductor required for membership.
Fall or Spring (1-1)

**15A-B-C-D. Choral Club**

Entrance upon examination.
Fall or Spring ($\frac{1}{2}$-$\frac{1}{2}$)

***16A-16B-16C-16D. Individual Study of an Orchestral Instrument**

Fall and Spring (1-1)

***17A-17B-17C-17D. Individual Study of Voice**

Fall or Spring (1-1)

***18A-18B-18C-18D. Individual Study of Piano or Organ**

Prerequisite: The ability to play artistically hymns and folk songs of the type found in the Golden Book of Favorite Songs.
Fall or Spring (1-1)

**20A-B-C-D. Chorus**

Open to anyone interested in singing standard choral works. No examination required. No public performances.
Fall or Spring ($\frac{1}{2}$-$\frac{1}{2}$)

**26A-B-C-D. Band**

Permission of the conductor required for membership.
Fall or Spring (1-1)

**28A-28B. Piano**

Fundamental playing and reading technics for the pianoforte. Emphasis upon playing by ear, and the development of interpretative ability. For beginners only. No credit for music majors and minors.
Year course (1-1)

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* See page 138, conditions under which credit may be given for music study under rivate instructors.

### 28C-28D. Continuation of First Year Piano

Study of more advanced piano literature. Considerable emphasis upon ensem piano playing and accompanying. Prerequisites: Music 28A-28B, and consent instructor. No credit for music majors. Credit will be given to music minors. 28C a prerequisite for 28D.

Year course (1-1)

### 29A-29B. Class Voice

A class for beginners in the vocal field taking up the problems of breath contr, tone placement, articulation and enunciation. Frequent performance before cla required. Limited to 15. 29A or equivalent is a prerequisite for 29B.

Year course (1-1)

### 29C-29D. Continuation of First Year Voice

Study of more advanced songs with attention being given to interpretation, well as continued work on tone, articulation and placement. Frequent performan before class required. Limited to 15. 29C or equivalent is a prerequisite for 29D.

Year course (1-1)

### 30A-30B. Chamber Music

String and woodwind ensembles. The consent of the instructor necessary f admission to class.

Year course (1-1)

## Upper Division Courses

(For description of courses in the field of music appreciation and history music, see *aesthetics*).

### 105A-105B. Advanced Harmony and Composition

Study of the possible types of modulation and chromatic harmonies: continuati of harmonic analysis and original composition. Text—Alchin: Applied Harmo Vol. II. Prerequisite: Music 4A-4B. 105A is a prerequisite for 105B.

Year course (3-3)

### 106. Counterpoint

Study of the five species of counterpoint with much practice in writing in su forms. Application of contrapuntal style to modern composition. Prerequisit Music 4A-4B.

Fall (2)

### 107. Form and Analysis

Aural and visual analysis of music forms through a consideration of structur harmonic content, and style. Prerequisite: Music 105A-105B.

Spring (2)

### 111A-B-C-D. Women's Glee Club—Treble Clef

Entrance upon examination.

Fall or Spring (½-½) (A maximum of 2 units in glee club may be counte toward the A.B. Degree).

### 112A-B-C-D. Men's Glee Club

Entrance by examination.

Fall or Spring (½-½) (A maximum of 2 units in glee club may be counte toward the A.B. Degree).

### 113A-B-C-D. Orchestra

Permission of the conductor required for membership.

Fall or Spring (1-1). A maximum of 4 units in orchestra may be counte toward the A.B. Degree).

### 115A-B-C-D. Choral Club

Entrance by examination.

Fall or Spring (½-½) (A maximum of 2 units in choral club may be counte toward the A.B. Degree).

***116A-116B-116C-116D. Advanced Individual Study of an Orchestral Instrument**

Fall or Spring (1-1)

***117A-117B-117C-117D. Advanced Individual Study of Voice**

Fall or Spring (1-1)

***118A-118B-118C-118D. Advanced Individual Study of Piano or Organ**

Fall or Spring (1-1)

**119A. Instrumental Conducting**

Conducting and reading of orchestral scores.
Fall or Spring (1)

**120A. Vocal Conducting**

The theory of vocal conducting together with practical experience gained from directing the college chorus. Prerequisite: Upper division music major or minor.
Fall and Spring (1)

**121A-121B. Instrumentation and Arranging**

Arranging of music for full orchestra. Selected works of pupils to be performed by standard orchestras. 121A is a prerequisite for 121B.
Year course (2-2)

**126A-B-C-D. Band**

Permission of the conductor required for membership.
Fall or Spring (1-1) (a maximum of 4 units in band may be counted toward the A.B. Degree)

**128. Methods in Teaching Piano**

Teaching of beginning intermediate and beginning piano. Survey of materials available for child and adult classes. Special consideration of the problems of the adult beginner. Supervised teaching of beginning students in individual lessons and in class groups.
Summer (3)

**130A-130B. Chamber Music**

String quintet and woodwind ensembles only. Permission of the instructor necessary for class membership.
Year course (1-1)

## Graduate Courses

**200A-200B. Special Problems in Music**

A graduate course in which students may carry out projects in various fields of music under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply for work within a certain field after conference with the music faculty. Prerequisite: Graduate standing.
Fall and Spring (2-2)

**Music 203. Musicology**

Survey of bibliography and methods of research in music history and literature. Emphasis upon inter-relationship of musical developments and trends in other arts. Completion of an acceptable thesis in fields of investigation chosen by the student. Prerequisites: Aesthetics 102A-102B, graduate standing and consent of the instructor. Advanced courses in Harmony, Composition, and Form and Analysis are desirable.
Fall (2)

**Music 206. Composition**

Music composition in the larger forms. Students will be required to submit a complete work in one of the larger musical forms as thesis in the course. Prerequisites: Music 105A-105B, 106A, 107A, 121A, graduate standing and consent of the instructor.
Spring (2)

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* See page 138, conditions under which credit may be given for music study under private instructors.

## CONDITIONS UNDER WHICH CREDIT MAY BE GIVEN FOR MUSIC STUDY UNDER PRIVATE INSTRUCTORS

Credit may be allowed for private instruction in music under the following c ditions:

1. The applicant for such credit must be a regularly enrolled student in the mu department of the college.

2. The instructor giving such private work must be approved by the Mu Department. All private work and the names of all such teachers must be registered the office of the music department chairman at the beginning of the semester.

3. In the case of first semester private study, a placement examination conduc by the music department faculty at the beginning of the semester will show the sta of the student at the beginning of his work.

4. Evidence that the standards of the Music Department have been met will shown by an examination conducted by the music department faculty at the end of semester.

5. Ten clock-hours of lessons, and 100 hours of practice per semester are requi for one unit of credit.

# PHILOSOPHY

## IN THE DIVISION OF SOCIAL SCIENCES

*Major* work is not offered in philosophy.

### Minor

A *liberal arts minor* is offered in philosophy. The minor must include at least units of work in philosophy, 9 units of which must be from courses carrying up division credit.

A *teaching minor* is not offered in philosophy.

NOTE: Courses in philosophy may not be used to meet any part of the 12-u social science requirement, nor may they be used as part of a social science major minor.

### Lower Division Courses

**1A-1B. Introduction to Philosophy**

A non-historical introduction to the types and problems of philosophy. The m inclusive and influential world-views are studied at length, then the principal proble of philosophy are considered in terms of these basic systems. 1A is a prerequisite for 1

Fall and Spring (3-3)

**3A-3B. History of Thought**

A study of the basic ideas of Western Civilization in their historical developme The making of the modern mind as revealed in the development of philosophy and the relations between philosophy and science, art and religion. The history of id against the social and political backgrounds from which they came. Philosophy 3A i prerequisite for 3B.

Year course (3-3)

**20. Logic**

Logic and language. The logic of argument and proof. Analysis of fallacies. Ap cation of formal principles to scientific and everyday thinking.

Spring (3)

## Upper Division Courses

### 101. Contemporary Philosophy

A study of the most influential philosophies of the mid-twentieth century, particularly those playing a dynamic role in contemporary life. Pragmatism, idealism, naturalism, hedonism, positivism, theism, economic determination, materialism, authoritarianism and liberalism (of various types) will be considered, and the student will be encouraged to analyze and evaluate each in a critical manner.

Spring (3)

### 111A-111B. Theory of the State

The nature of the state, its organization and activities, and its relation to the individual and to other states. Special attention is given to recent developments in the field of political thought. Not open to students with credit in Political Science 111A-111B.

Year course (3-3)

### 130. Ethics

The search for the Good Life. The principal theories of ethical obligation, the sources of moral authority, and the various views regarding the nature of the "highest good" and the related goals of intelligent living.

Fall (3)

### 136. Philosophy of Art

A study of the nature of esthetic experience, both in itself and in relation to the rest of human experience. Particular effort is made to disentangle man's esthetic attitude and activity (whether in the field of art, nature or daily life) from those experiences and evaluations with which the esthetic is frequently confused. The principal theories of art, both traditional and contemporary, are studied at length—both in relation to actual artistic production and to art's role in society.

Spring (3)

### 137. Philosophy of Science

A critical examination of the basic concepts and methods underlying contemporary scientific thought. Nature of scientific knowledge, conceptions of nature, natural law, relation of the scientific interest to other interests, and contributions of the special sciences to a view of the universe as a whole.

Fall (3)

# PHYSICAL EDUCATION

## IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

A *liberal arts major* is not offered in physical education.

A *general major* is offered in the field of recreation. For specific requirement refer to the outline for the curriculum in recreation, page 68, and to page 20 for fu ther information on the general major.

A *teaching major* is offered in physical education for the general secondary an the special secondary credentials. Refer to the outlines of requirements for the credentials.

### Minor

A *liberal arts minor* is offered in physical education or in recreation. The pla for these minors must be approved by the departmental representative. A minor co sists of at least 15 units of work in one field, 9 units of which must be from cours carrying upper division credit. Refer to page 21 for further information on th minor in recreation.

A *teaching minor* is offered in physical education for the general secondary, th general junior high school, and the special secondary credentials. It may be offere only as a second teaching minor for the general elementary and the kindergarte primary credentials. For specific information, refer to the outlines of requiremen for these credentials.

A *teaching minor in recreation* is offered only as a second minor for studen majoring in physical education. Non-physical education majors may select recreatio as a teaching minor for the general junior high school or the special secondary cr dential. For specific information, refer to the outlines of requirements for the credentials.

### MEN'S DEPARTMENT

Candidates for a teaching credential in physical education should refer to th statement "Admission to Teacher Education Curricula" on page 25. For the teache education curriculum in physical education, see page 35.

With the exceptions listed, all lower division students must elect one or mo courses each semester. Two units of activity credit must be offered for graduatio Exceptions: (a) veterans of World War II; (b) students over 25 years of age and (c) limited students who may be excused by the department chairman. N permanent excuses from required activity courses will be granted. The college phys cian, in conjunction with the chairman of the department, will consider stringent case on an individual basis and recommend.

A medical examination is given each student when entering and recommendatio is made as to type of activity most beneficial. Developmental physical education class to care for special needs are offered. The content of the required courses is planne to give each student an opportunity to participate in many activities of carry-ov value, developmental nature, and recreational interest. An opportunity is afforde for students to participate in competitive sports and intramural programs.

Freshmen are required to choose from courses numbered 1-10. Sophomores an upper division students may choose from all courses offered. An activity course ma be taken for credit once only. The complete uniform will be furnished by the studen

## Lower Division Courses

## ACTIVITY COURSES

**1A-1B-1C-1D. Developmental Physical Education**
Fall and Spring (½-½-½-½)

**2. Basketball**
Fall and Spring (½)

**3. Boxing**
Fall and Spring (½)

**4. Gymnastics**
Fall and Spring (½)

**5. Soccer**
Fall (½)

**6. Softball**
Spring (½)

**7. Touch Football**
Fall (½)

**8. Track and Field**
Spring (½)

**9. Volleyball**
Fall and Spring (½)

**10. Wrestling**
Fall and Spring (½)

**13. Archery**
Fall and Spring (½)

**14. Badminton**
Fall and Spring (½)

**15. Fencing**
Fall and Spring (½)

**16. Golf**
Spring (½)

**17. Handball**
Fall and Spring (½)

**18. Tennis**
Fall and Spring (½)

## INTERCOLLEGIATE SPORTS

**23. Baseball**
Spring (½)

**4. Basketball**
Fall (½)

**26. Cross Country**
Fall (½)

**8. Football**
Fall (½)

**9. Golf**
Spring (½)

**30. Gymnastics**
Spring (½)

**32. Rowing**
Spring (½)

**34. Tennis**
Spring (½)

**35. Track**
Spring (½)

**36. Wrestling**
Spring (½)

## WOMEN'S DEPARTMENT

Candidates for a teaching credential in physical education should refer to the atement "Admission to Teacher Education Curricula" on page 25, and to the utline for the A.B. Degree with Special Credential in Physical Education on page 36.

With the exceptions listed, all lower division students must elect one or more ourses each semester. Two units of activity credit must be offered for graduation. xceptions: (a) veterans of World War II; (b) students over 25 years of age; nd (c) limited students who may be excused by the department chairman. No permanent excuses from required activity courses will be granted. The college physician, conjunction with the chairman of the department, will consider stringent cases on individual basis and recommend.

A medical examination is given each student when entering and recommendation made as to type of activity most beneficial. Developmental physical education asses to care for special needs are offered. The content of the required courses is anned to give each student an opportunity to participate in many activities of rry-over value, developmental nature, and recreational interest.

Freshmen are required to choose from courses numbered 1-10. Sophomores may oose from all courses offered. An activity course may be taken for credit once ly. The complete uniform will be furnished by the student.

The individual activities, tennis, golf, archery, badminton, and dancing are ered through the year. Candidates for the special secondary credential in physical ucation must select one as a major activity and two others as minors. Skills in the tivities must be maintained as prerequisite to the senior course, Physical Edution 185.

## Lower Division

## ACTIVITY COURSES

**-1B. Fundamental Skills**

Practice in efficient fundamental body movements.
Fall and Spring (½-½)

**2A-2B. Folk Dancing** (Men and Women)
(2A is a prerequisite for 2B)
Fall and Spring (½-½)

**3A-3B. Modern Dance**
Practice in dance techniques and rhythms.
(3A is a prerequisite for 3B)
Fall and Spring (½-½)

## TEAM SPORTS

**4. Fieldball, Soccer, Speedball**
Fall or Spring (½)

**5. Softball, Volleyball, Hockey**
Fall or Spring (½)

**6. Basketball**
Fall or Spring (½)

**11A-11B. Ballroom Dancing** (Men and Women)
(11A is a prerequisite for 11B)
Fall and Spring (½-½)

**12A-12B. Advanced Modern Dance** (Men and Women)
Laboratory experiments in advanced choregraphy and percussion accompai ment. Prerequisites: 3A and 3B.
Year course (1-1)

**13A-13B. Archery**
Fall and Spring (½-½)

**14A-14B. Badminton**
Fall and Spring (½-½)

**16A-16B. Golf**
Fall and Spring (½-½)

**18A-18B-18C. Tennis** (Beginning, intermediate, advanced)
(18A is a prerequisite for 18B; 18B is a prerequisite for 18C)
Fall and Spring (½-½-½)

**20A. Swimming** (Nonswimmers only)
Fall and Spring (½)

**20B. Swimming** (Intermediate)
Fall and Spring (½)

**21. Life Saving**
Learning of safety in and on the water and the ability to assist or rescue a per in danger of drowning. Course content qualifies for the American Red Cross I Saving Certificate.
Fall and Spring (½)

## PROFESSIONAL THEORY COURSES

### Men and Women
### Lower Division Courses

**43. Professional Activities** (Men)
This course presents an opportunity for majors to develop the skills and t niques of the dance as well as other phases of the activity program. Organization presentation of materials are emphasized.
Fall (2)

### 44. Professional Activities (Men)

Emphasis is placed on acquiring the skills, teaching techniques, and development of knowledge and interests in the combative activities, tumbling, apparatus, and stunts.
Spring (2)

### 51. First Aid and Safety Education

The accepted procedure in meeting the emergencies which arise daily in any of the many places where the physical education teacher is called on for first aid. Attention s given to the prevention and minimizing of common accidents. Course contents qualifies for American Red Cross Certificate.
Fall or Spring (2)

### 53. Physical Education in the Elementary School

The content of the State program in physical education for the elementary school orms the basis of the course. Candidates for the Elementary Credential are required o take the course section which includes two lectures and two laboratory periods per week.
Fall or Spring (2½)

Candidates for the Special Secondary Credential in physical education may take he course section which includes two lectures without laboratory periods.
Fall (2)

### 2. Introduction to Physical Education

The history and principles of physical education and sports movements of the past. The aims and objectives of the modern school program are studied and an effort s made to give the student a basic philosophy or a background for his professional raining. Required of all physical education majors and minors.
For Men: Fall (2)
For Women: Spring (2)

## Upper Division Courses

### 45. Professional Activities: Team Sports (Men)

The skills, rules, teaching techniques, officiating, and organization of materials in uch sports as soccer, touch football, softball, hockey, basketball, and others are mphasized.
Fall (2)

### 46. Professional Activities: Individual Sports (Men)

The skills, rules, teaching techniques, officiating, and organization of materials in uch sports as handball, tennis, badminton, archery, golf, and others are emphasized.
Fall (2)

### 47. Professional Activities: Coaching Baseball and Track (Men)

Organization of practice sessions, drills for developing fundamental drills and ecial abilities. Problems of scheduling, handling teams and game strategy are taken p. Rules, sessions, and officiating techniques are given attention.
Spring (2)

### 48. Professional Activities: Coaching Football and Basketball (Men)

Organization of practice sessions, drills for developing fundamental skills and ecial abilities. Problems of scheduling, handling teams, and game strategy are taken p. Rules, sessions, and officiating techniques are given attention.
Fall (2)

### 55. Applied Anatomy and Kinesiology

Anatomical and kinesiological analysis of human structure and movement. pplication of analysis relative to mechanical principles as influenced by efficiency ctors of body functions. Prerequisite: Zoology 8 or 20.
Fall (3)

### 6A-156B. Sports Methods (Women)

Analysis of skills in basketball, hockey, soccer, speedball, volleyball, and softball; ethods of presenting sports to large groups; study of rules and officiating. Prequisites: Physical Education 4, 5, and 6.
Fall and Spring (2-2)

**160. Teaching of Body Mechanics** (Women)

A study of efficient use of the body in daily living; evaluation and classification o exercises, methods, and practice in planning and presenting material.

Fall (2)

**161. Folk Dancing Materials and Advanced Techniques** (Women)

A study of folk customs, festivals, and costumes. Selection of dance material for various age groups. Practice in advanced techniques. Prerequisite: Physica Education 2A.

Fall (2)

**164A-164B. Methods in Modern Dance**

Methods in the teaching of modern dance techniques and choreography. Selectio of materials and course planning for the secondary school. Prerequisite: Physica Education 12A-12B.

**165. Administration of Community Recreation**

An introductory course in the principles of organization and promotion of leisu time and recreation activities. Content consists of a study of recreation leadership, th growth of the recreation movement, the operation of areas and facilities, program activities, features, services, organization and administration problems. A require course for Recreation minors.

Fall (3)

**168. Physiology of Exercise**

A non-laboratory course emphasizing the relation of physiology to muscula exercise in physical activities. Prerequisites: Physiology 1A and Zoology 8 equivalent.

Spring (3)

**170. Recreational Leadership**

A study of the practical application of the activities adapted to group recreatio programs. Activities include arts and crafts, special athletic events, drama, dancin music, hobbies, camping and hiking, socials, games and contests and stunts. Th course is presented through lectures, discussions, field trips and actual class partic pation in the above activities. Required of all Physical Education majors, Physic Education and Recreation minors.

Spring (3)

**177. Individual Program Adaptation**

The adaptation of programs to the capacities and physical needs of individua including analysis and evaluation of aims, techniques and procedures in development preventive and corrective measures. Special problems, such as survey of the situatio recognition of divergencies, selecting and assigning of students, instructional problem motivation, follow-up, teacher limitations and public relations are considered. Pre quisites: P.E. 155 and senior standing.

Spring (3)

**185. Techniques of Individual Sports** (Women)

A course summarizing rules and teaching methods and testing individual playi techniques and knowledge in tennis, archery, badminton, and swimming. Prerequisit Senior standing.

Fall (1)

**190. Administration of Physical Education in the Secondary School**

Consideration of the problems and practices in the organization and administ tion of the secondary school activity program. Study and selection and adaptation activities, examination, and grouping of pupils, use and evaluation of tests. Selecti and maintenance of equipment and facilities. Women must take this course only wh offered in the women's department.

For Women: Fall (3)
For Men: Spring (3)

**199. Special Study in Physical Education or Recreation**

An opportunity is presented for extensive review of pertinent literature, individual research and advanced study of problems in the profession. Credit will range from 1 to 3 units according to the caliber of work. Prerequisite: Approval of the Chairman of the Division.
Fall or Spring (1 to 3)

### Graduate Courses

**200. Evaluation Procedures in Health, Physical Education and Recreation**

A study of tests and measurements in the profession with practice in their use, construction and interpretation of results. Prerequisite: Graduate standing.
Spring (2) (Offered in 1948-1949)

**201. Developmental Physical Education**

Intensive study of postural divergencies, lack of physical development, and methods of correcting such conditions through exercise are studied. Practice in making physical examinations, constructing individual exercise programs, teaching remedial exercises, as well as ethical procedures and limitations are considered. Prerequisite: Applied Anatomy and Kinesiology and graduate standing.
Fall (2)

**203. Problems in Physical Education**

A survey of current problems facing the Physical Education profession is studied through a review of the literature, discussion of trends, observation of school situations together with the analysis and evaluation of actual problems. Written reports are required. Prerequisite: Graduate standing.
Summer 1949 (2)

**204. Problems in Recreation**

A survey of current problems facing the Recreation profession is studied through a review of the literature, discussion of trends, observation of school situations together with the analysis and evaluation of actual problems. Written reports are required. Prerequisite: Graduate standing.
Summer 1949 (2)

## PHYSICAL SCIENCE

### IN THE DIVISION OF PHYSICAL SCIENCES

*Major* and *minor* work are not offered in physical science.

### Lower Division Courses

**1A. Introduction to Physical Science**

A survey course dealing with the nature of man's physical universe. Emphasis will be upon materials chosen from topics in astronomy and physics to show the nature and development of the scientific method and man's use of energy. Not open to students who have had a high school course with grades of A or B or who have credit for a college course in physics or astronomy or Physical Science 40. May be taken with or without plans to continue with 1B.
Fall and summer (3)

**1B. Introduction to Physical Science**

A continuation of Physical Science 1A. Emphasis will be upon units chosen from geology and chemistry to show the origins of natural materials and their use by man in the modern world. Not open to students who have had a high school course with grades of A or B or who have credit for a college course in either chemistry or geology. May be taken with or without credit in Physical Science 1A.
Spring (3)

# PHYSICS

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *liberal arts major* is offered in physics. Lower division requirements: Physics 1A-1B-1C-1D; Mathematics 3A-3B, 4A-4B; Chemistry 1A-1B or their equivalents. Recommended: A reading knowledge of French or German. Upper division requirements: A minimum of 24 upper division units in physics including Physics 105A-105B, 110A, 3 units chosen from 102 or 110B, and 199 (2 units). Six of the 24 units may be selected from a related field with approval of the Chairman of the Department.

A *teaching major* is offered in physics for the general secondary credential or as part of the *general science* major for the general junior high school credential or as part of the *physical science major* for the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *liberal arts minor* is offered in physics. The minor must include at least 15 units of work in physics, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in physics for the general secondary credential or as part of the *general science minor* for the general junior high, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

Note: A maximum of 12 units of lower division physics credit may be applied toward the A.B. degree.

### Lower Division Courses

**1A-1B-1C-1D. Principles of Physics**

A four semester course developing the fundamental ideas which underlie the subject of physics, with applications in the discussion of practical problems. This course is designed for students in the various fields of science and engineering who desire a thorough background of the elementary principles. Prerequisites: Concurrent or previous registration in Mathematics 3A. Physics 1A is a prerequisite to Physics 1B, 1C or 1D. Students are expected to take the courses in the following sequence and deviations from this may be made only with the permission of the instructor. Each course provides two lectures and one three-hour laboratory period per week.

**1A. Mechanics of Solids**
Fall, spring, summer (3)

**1B. Mechanics of Fluids and Heat**
Spring, summer (3)

**1C. Electricity and Magnetism**
Fall, summer (3)

**1D. Sound and Light**
Spring, summer (3)

**2A-2B. General Physics**

A year course covering the elementary principles of physics. This course is primarily for liberal arts and certain pre-professional students who do not desire an intensive preparation in the field. Lectures, demonstrations and discussions. First semester: Properties of matter, mechanics and heat. Second semester: Electricity and magnetism, sound and light. Prerequisite for 2A: Two years of high school mathematics. Prerequisite for 2B: Physics 2A.

Year course (3-3)

**3A-3B. Physical Measurements**

A year course in laboratory physics designed to accompany Physics 2A-2B. First semester: Properties of matter, mechanics and heat. Second semester: Electricity and magnetism, sound and light. One three-hour laboratory period per week.

Prerequisite for 3A: Concurrent or previous registration in Physics 2A. Prerequisite for 3B: Concurrent or previous registration in Physics 2B.

Year course (1-1)

## Upper Division Courses

### 102. Basic Electronics

The fundamental principles of electron tubes and their associated circuits, including high-vacuum and gas tubes, rectifiers, amplifiers, oscillators and electronic instrumentation. Prerequisites: Physics 1C and Mathematics 4A.

Fall (3)

### 104. Communications

An intensive study of the elements and systems used in radio and wire communication including: Circuit elements and resonant circuits, oscillators, modulators, detectors, wave radiation and propagation. Students with credit for Engineering 104 may not receive credit for this course. Prerequisite: Physics 102.

Spring (2)

### 105A-105B. Analytical Mechanics

Treatment of the fundamental principles of Newtonian mechanics. First semester: Study of the statics and kinematics of particles and rigid bodies. Second semester: Study of the dynamical principles underlying linear and rotary motion of rigid bodies, with additional work in vibration and impact. Use of elementary vector analysis in solving of physical applications in mechanics. Students with credit in Engineering 102A-102B may not receive credit for this course. Prerequisites: Physics 1A-1B or 2A-2B; and a working knowledge of the calculus. Physics 105A is prerequisite for Physics 105B.

Year course (3-3)

### 106. Optics

A study of reflection, refraction and dispersion of light, with applications to optical instruments, followed by a survey of phenomena indicative of the physical nature of light, including interference, diffraction, polarization and spectral radiation. Prerequisite: Physics 1D or 2B-3B.

Fall (3) (Offered in 1948-49 and alternate years)

### 107. Electrical Measurements

The theory and use of electrical measurements, including measurements of current, voltage, power, resistance, capacitance, inductance, and the parameters of resonant circuits. One hour of lecture and three hours of laboratory work per week. Prerequisites: Physics 1C or 2B-3B and a working knowledge of the calculus.

Spring (2)

### 108. Atomic Particles

A study of the experimental evidence for the existence of the elemental physical particles and their properties and of the physical concepts to which this experimental evidence has led. Prerequisites: Physics 1C or 2B-3B.

Spring (3)

### 110A. Principles of Electrostatics and Electromagnetism

Elements of the mathematical theory of steady and quasi-steady electric and magnetic fields with applications. Prerequisites: Physics 1C or 2B-3B and a working knowledge of the calculus.

Fall (3)

### 110B. Electromagnetism

Extension of the material covered in Physics 110A, including alternating and transient current phenomena and electromagnetic radiation. Prerequisite: Physics 110A.

Spring (3) (Offered in 1948-49 and alternate years)

### 112. Heat and Themodynamics

A study of the thermal properties of matter with an introduction into the kinetic theory of gases and the laws of thermodynamics. Prerequisites: Eight units in physics and a working knowledge of the calculus.

Fall (3) (Offered in 1949-50 and alternate years)

**114. Acoustics**

A study of wave motion and its applications to the production, transmission and reception of sound. Material in architectural acoustics, speech and hearing, and acoustical instruments is presented. Prerequisites: Physics 10 or 2B-3B.

Spring (3) (Offered in 1949-50 and alternate years)

**122. Electronics Laboratory**

An experimental study of electron tubes and their associated circuits. Study of the cathode ray oscilloscope, vacuum tube voltmeter, characteristics of power supplies, amplifiers and filter systems. One hour of lecture and three hours of laboratory work per week. Prerequisite: Previous or concurrent registration in Physics 102, or permission of the instructor.

Fall (2)

**124. Radio Measurements**

A laboratory course in measurements of the parameters of resonant circuits at radio frequencies. Study of the properties of oscillators, modulators, detectors and wave guides. Students with credit in Engineering 124 may not receive credit for this course. Prerequisite: Previous or concurrent registration in Physics 104.

Spring (2)

**126. Optical Measurements**

An experimental study of lenses, optical systems and instruments, including the study of the wave character of light and the measurement of the wave length of light. One hour of lecture and three hours of laboratory work per week. Prerequisite: Previous or concurrent registration in Physics 106, or permission of the instructor.

Fall (2) (Offered in 1948-49 and alternate years)

**128. Experimental Atomic Physics**

Laboratory measurements in the fundamental properties of atomic particles. Prerequisite: Previous or concurrent registration in Physics 108 or permission of the instructor.

Spring (2) (Offered in 1948-49 and alternate years)

**132. Heat and Pyrometry Laboratory**

Laboratory work selected from experiments in thermal expansion, specific heat, heat of combustion, radiation, calibration and use of various temperature measuring devices. One hour of lecture and three hours of laboratory work per week. Prerequisite: Previous or concurrent registration in Physics 112 or permission of the instructor.

Fall (2) (Offered in 1949-50 and alternate years)

**134. Acoustical Measurements**

Experimental study of wave motion, velocity of sound in various media, diffraction, refraction and reflection of sound, microphone and loudspeaker characteristics. One hour of lecture and three hours of laboratory work per week. Prerequisite: Previous or concurrent registration in Physics 114 or permission of the instructor.

Spring (2) (Offered in 1949-50 and alternate years)

**152. Advanced Electronics**

A study of the internal behavior of electron tubes with an introduction to electron optics; consideration of special tubes used in physics and engineering. Prerequisite: Physics 102.

Spring (2)

**166. Honors Course**

An individual study arrangement for students admitted to the Honors Group. Enrollment through the Department Chairman, subject to the approval by the Committee on Honors. See page 15 for requirements for admission to this group.

Fall or Spring (Credit to be arranged)

**199. Special Study**

Reading and laboratory work on a special problem in physics selected by the student. Each student will be assigned a member of the staff who will supervise his work. All candidates for the A.B. Degree in physics are required to enroll for two

units of this course during the upper division work. Credit, hours and topics to be arranged in each case.
Fall and Spring (1 or 2—1 or 2)

### Graduate Courses

**200. Seminar**

An intensive study of some phase of advanced physics under the immediate direction of a member of the staff. Each student will choose a problem from one of the following fields for study and will prepare and present a paper to the combined staff and all students enrolled in this course.

a. Mathematical Physics.
b. Advanced Mechanics.
c. Kinetic Theory of Gases.
d. Advanced Acoustics.
e. Advanced Electronics and Electricity.
f. Electromagnetic Radiation.
g. Atomic Physics.

Prerequisite: Graduate standing.
Fall and Spring (2-2)

**299. Special Study**

Independent theoretical and experimental investigation of some topic in physics chosen by the student. Each student taking work in this course will be required to write a paper reporting his results. A member of the staff will be assigned to supervise the work. Prerequisite: Graduate standing.
Fall and Spring (1 or 2—1 or 2)

# PHYSIOLOGY

## IN THE DIVISION OF LIFE SCIENCES

*Major* and *minor* work are not offered in physiology. Courses in physiology, however, may be used as part of the major in zoology and are recommended as part of the lower division requirements for the major in psychology. For specific information, refer to these departments.

### Lower Division Courses

**1A. Human Physiology**

A lecture course considering the functions of the human body, and including a brief reveiw of the microscopic and gross anatomy of the structures discussed. Prerequisites: Elementary chemistry and high school or college biology or zoology. Three hours of lecture per week. Credit reduced to 2 units, for students having credit for Zoology 20.
Spring (3)

**1C. Human Physiology**

A study of the human functions through laboratory experiments and demonstrations. Prerequisites: Physiology 1A completed or in progress. Six hours of laboratory per week.
Spring (2)

### Upper Division Courses

**101. General Physiology**

Fundamentals of plant and animal functions. Two lectures and two laboratory periods per week. Prerequisites: Biology 10A-10B or Zoology 1A-1B and Chemistry 1A-1B or Chemistry 2A-2B.
Spring (4)

# POLITICAL SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *liberal arts major* is offered in political science. This major consists of 36 units of work in political science and closely related work chosen from the fields of economics, geography, history, philosophy, psychology, and sociology. Under the direction of the Chairman of the Department, the 36 units will be distributed as follows:

(a) Required courses: Political Science 1A-1B and 71A-71B (one year-course of which should be taken in the lower division) and Political Science 199.

(b) Eighteen upper division units in political science distributed among two of the following groups: Group I: theory and government—courses numbered 100-139; Group II: administration—courses numbered 140-149; Group III: international affairs—courses numbered 150-179.

(c) Six units of upper division work selected from the related fields listed above, this work to be chosen under the direction of the Chairman of the Department and to be outside the field of the student's minor.

Students majoring in political science are advised to become as familiar as possible with the related fields listed above. Majors should have a reading knowledge of at least one foreign language.

A *teaching major* is not offered in political science; however, courses in political science may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *liberal arts minor* is offered in political science. The minor consists of from 15 to 18 units of work, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in political science for the general secondary credential; however, courses in political science may be used as part of the *social science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. Refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. Comparative Government**

A comparative study of typical governments. Semester I: England, France and Switzerland. Semester II: Italy, Germany, Russia and Japan.

Year course (3-3)

**71A-71B. Introduction to American Government and Politics**

Semester I: Governmental organization in the United States; the federal system; the organization, powers and functions of the legislative, executive and judicial branches of the government; the relations between federal, state and local units of government.

Semester II: Expansion of governmental functions and the development of means of democratic control; an examination of the increased use of government as an instrument of social control; the history, motivation, methods and control of political parties; nominations, elections and minority groups; pressure politics.

NOTE: Not open to freshmen.

Year course (3-3)

### Upper Division Courses

**101. American Institutions**

A study of the principles of the Constitution of the United States of America, and a survey of the political and social institutions which have developed under the Constitution.

Fall (3)

**105. American Political Theory**

A survey of the development of American ideas concerning political authority from the period of colonial foundation to the present time.

Fall (3)

**111A-111B. Theory of the State**

The nature of the state, its organization and activities, and its relation to the individual and to other states. Special attention is given to recent developments in the field of political thought. Not open to students with credit in Philosophy 111A-111B.
Year course (3-3)

**120. Political Parties**

A critical analysis of the political party as a part of the process of government; party organization and activities; nominating and campaign methods; theories and functions of the party system; party responsibility. Special emphasis will be placed upon the function of the two-party system in American government.
Fall (3)

**121. Basic Factors in American Politics**

An analysis of American political, legal, economic, and social factors in their relation to our political system and the public interest.
Spring (3)

**122. Propaganda and Public Opinion**

A study of the forces which mold the American public mind, the practice of propaganda, a description and analysis of public relations, pressure groups and their effect in American public life.
Spring (3)

**139A-139B. American Constitutional Development**

A study of the work of the Convention of 1787 and of significant phases of American constitutional law. (Formerly Political Science 175A-175B.) Not open to students with credit for History 172A-172B.
Year course (3-3)

**140. Principles of Public Administration**

A study of the function of administration in the government of the United States: administration in a federal state; relations between administration and the legislative and judicial branches of government; bureaucracy; administrative "legislation" and "adjudication"; administration and democratic controls. (Formerly Political Science 143A.)
Fall (3)

**141. Organization and Procedure in Public Administration**

An introduction to management in the administration of public affairs: detailed examination of the forms and purposes of administrative organization; types of government agencies, their purposes and effectiveness; internal management and control; interagency relationships; personnel administration; budgets and auditing as administrative control devices; methods of administrative action. (Formerly Political Science 143B.)
Spring (3)

**142. State Government**

A study of the political structure and its operation used in the carrying on of the functions exercised by the states; state-federal relations; state-local government relations; particular emphasis on California government.
Fall or Spring (3)

**143. Municipal and County Government**

A study of the organization and its operation used to carry into effect the functions assigned to local governmental units; particular emphasis upon local government in California.
Fall or Spring (3)

**150A-150B. International Relations**

An historical and analytical consideration of the basic factors—historic, geographic, economic, ideologic, and strategic—which underly and condition the modern conflict between the "sovereign state" and the "community of nations." Fall semester: Origins and development through the nineteeenth century. Spring semester: Twentieth century experimentation and conflict.
Year course (3-3)

### 152. International Organization

A critical analysis of the organization by which the international community seeks to provide for the exercise of legislative, administrative and judicial functions on the international level: Diplomatic and consular corps; conferences; administration through commissions and unions; amicable procedures for settlement of disputes; The League of Nations-United Nations experiment. (Formerly part of Political Science 141A-141B.)

Spring (3)

### 153. Principles of International Law

The function of law in the international community. The historical development of the ideas and rules of international law and their place in the modern diplomatic and legal structure. (Formerly part of Political Science 133A-133B.)

Fall (3)

### 154. International Law and the Courts

A case study of the application of the rules of international law in national and international courts. (Formerly part of Political Science 133A-133B.)

Spring (3)

### 158A-158B. American Foreign Policy

Lectures and reading in the field of American foreign relations since 1776, with special emphasis, in the second semester, upon affairs since 1900. A general survey course. (Formerly Political Science 176A-176B.) Not open to students with credit for History 176A-176B.

Year course (3-3)

### 160. Government of the British Dominions

Development of the new British Empire and imperial relations of the self-governing dominions; government of Canada, Australia, New Zealand, and South Africa; conditioning historical, economic and racial factors. Not open to students with credit for History 156B.

Spring (3)

### 199. Special Studies for Advanced Students

Directed study and research in the field of political science.

Spring (2)

# PSYCHOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *liberal arts major* is offered in psychology. Lower division requirements: sychology 1, 10, and 11 or 12; 6 units in biology, zoology, or physiology; 6 units philosophy, anthropology, or sociology. Recommended: Mathematics C. Upper divi- on requirements: a minimum of 24 upper division units in psychology including sychology 104A and 160A.

A *teaching major* is not offered in psychology.

### Minor

A *liberal arts minor* is offered in psychology. The minor must include at least units of work in psychology, 9 units of which must be from courses carrying upper vision credit.

A *teaching minor* is not offered in psychology.

NOTE: Courses in psychology may not be used to meet any part of the 12-unit cial science requirement, nor may they be used as part of a social science major minor.

### Lower Division Courses

#### General

An elementary survey of normal adult psychology, descriptive and organizational; e subjective and objective aspects of behavior. Furnishes basis for all other courses psychology and is prerequisite therefor.

Fall or Spring (3)

#### . Advanced General Psychology

A comprehensive treatment of the fundamentals of psychology as the science of havior and experience through a historical and an experimental approach. Required all majors. Prerequisite: Psychology 1.

Fall or Spring (3)

#### . Applied Psychology

A survey of the fields in which the basic principles of psychology may be applied. introduction to an interpretation of statistical data and its utilization in the plication of psychological principles to problems of daily living. Required of all nmajors who plan to take upper division courses in psychology. Prerequisite: ychology 1.

Fall or Spring (3)

#### Mental Hygiene

An examination and interpretation of the factors which go into the making of person as he adapts himself to the social world about him. The development of the rmal personality. Prerequisite: Psychology 1.

Fall or Spring (3)

### Upper Division Courses

#### 2. Child Psychology

A survey of the child's motor, social, emotional and intellectual development m conception to pre-adolescence, with a view to identifying general trends, and luating individual differences in performance and in developmental patterns. Pre- uisite: Psychology 10, 11, or 12. Not open to students with credit in Education 102B.

Fall or Spring (3)

#### . Psychology of Adolescence

A study of the characteristics of normal adolescent children, as indicated by ent research in the field of adolescent growth, development and behavior, and by t-hand observations to be conducted by class members, with a view to (1) pro- ting and understanding of the behavior of normal adolescents, (2) developing sitivity for detection of deviation from the norm, and (3) recognizing practical plications for meeting the needs of adolescents. Prerequisite: Psychology 10, 11, 12. Not open to students with credit in Education 102C.

Fall or Spring (3)

### 104A. Statistical Methods in Psychology

An introduction to the use of quantitative methods in psychology, with emphasi upon measures of central tendency and variability, graphic methods and percentiles linear correlation, and the applications of the normal probability curve. Prerequisite Psychology 10, 11, or 12.

Fall or Spring (3)

### 104B. Advanced Statistics

A further study of quantitative methods in psychology with particular emphasi on methods of correlation, chi-square, and contingency, and an introduction to th analysis of variance. Prerequisites: Mathematics C and Psychology 104A, or per mission of the instructor.

Spring (3)

### 105A. Psychological Testing (Group)

A critical review of the principal intelligence, personality, aptitude and voca tional interest tests, with emphasis upon problems of measurement in the variou fields. Attention is given to procedures used in test construction and administratior Prerequisite: Psychology 11 or Psychology 104A.

Fall (3)

### 105B. Psychological Testing (Individual)

A course offering instruction in the principles of individual testing and practic in the administration of the Stanford-Binet, Wechsler-Bellevue and the more widel used individual mechanical aptitude tests. Prerequisite: Psychology 105A or Psycholog 104A and consent of instructor.

Spring (3)

### 121. Personnel and Industrial Psychology

Psychological principles applied to problems of selection and assignment industrial personnel, employee training, and fatigue. Prerequisite: Psychology 104 or Economics 140, or Sociology 103.

Fall or Spring (3)

### 122. Measurement of Public Opinion and Attitude

A survey of the history, methods, and problems of public opinion and attitu measurement. Emphasis will be placed upon the polling of consumers and voters. order to give students experience in field work, they will be asked to serve as inte viewers in several community investigations. Prerequisite: Psychology 11 or 104 or Economics 140, or Sociology 103.

Fall or Spring (3)

### 130. Educational Psychology

A study of the science of human behavior as it relates to learning. Emphasis given to the principles of learning and maturation of the organism. Special aspec treated are the growth of meanings, thinking, memory and habit formation, motiv tion, transfer of learning, organic and environmental conditions affecting learnin individual differences, and the theory of audio-visual education. Not open to studen with credit in Education 130. Prerequisite: Psychology 1.

Fall or Spring (2)

### 131. Psychological Foundations of Personality

The nature of the human organism, its interaction with social and materi stimuli in the environment, and the resultant changes in the development of the pe sonality. Methods of studying and evaluating personality. A study of concepts that a basic in the development of a genuine mental hygiene. Course designed for perso engaged in social work or similar professions. Prerequisite: One full year of psycholo or equivalent.

Fall (2)

### 32. Problems of Personality Adjustment

A study of the application of the fundamental principles of personality to prob- ms of adaptation. Included will be such topics as the mental hygiene of the infant, the ild, and the adolescent, and mental hygiene in relation to school, home, marriage, ligion, vocational selection and occupational adjustment, and the adjustment prob- ms of war veterans. Prerequisite: Psychology 131 or permission of instructor.

Spring (2)

### 0. Physiological Psychology

Topics covered include the history of physiological psychology, neurophysiology ith emphasis upon integrative activities, receptor and effector processes, and the fects of hormones and narcotics upon behavior. Prerequisite: Psychology 10, 11 or 12 d Physiology, Biology or Zoology.

Spring (3)

### 5. Social Psychology

Personality as it develops in relation to social environment. Suggestion, imitation, dership, the crowd, public opinion, social control, prejudice, propaganda, sex differ- ces, race differences, etc. Prerequisites: Psychology 11 or 104A.

Spring (3)

### 0. Abnormal Psychology

The relation of psychology to the psychoneuroses and insanity; the appearance abnormal traits in incipient stages of mental disturbances. Methods of diagnosis d early treatment. Prerequisites: Psychology 10, 11, or 12 and Physiology, Biology Zoology.

Fall or Spring (3)

### 1A. Clinical Psychology: Diagnostic

A study of diagnostic devices in psychology, tests of clinical significance, ratings, erviewing for securing information, projective and case study analyses; problems insight, rapport, empathy, and prediction of individual behavior. Prerequisites: ychology 105A, 105B, 140, or 150.

Fall (3)

### 1B. Clinical Psychology: Therapies

A study of nonmedical psychotherapies—ancient, medieval, and modern, but contemporary; particularly nondirective counseling and such directive methods as ively operate in making friends and influencing people. Prerequisite: Psychology 1A unless waived by consent of instructor.

Spring (3)

### A-160B. Experimental Psychology

An experimental approach to the fundamental principles of psychology. The first m deals with the fields of memory and learning, including conditioning, problem ving, and thinking. The second term deals with the sensory and motor processes, luding such topics as errors of perception, work and fatigue. Two laboratory ses- ns and one hour of lecture each week. Laboratory work includes group and individual eriments, demonstrations of classical experiments, and extensive readings. Pre- uisites: Psychology 10 and 104A. Either semester course may be taken independently the other.

Fall and Spring (3-3)

### . Honors Course

A special study arrangement for students admitted to the Honors Group. Enroll- nt through the Department Chairman, subject to approval by the Committee on nors. (See page 15.)

Fall or Spring (Credit to be arranged)

### . Individual Studies in Psychology

Limited to students in the senior year. Permission to enroll must be obtained m a member of the staff. Credit limited to three units.

Fall and Spring (1-3)

# SOCIOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *liberal arts major* is offered in sociology. Lower division requirements: Sociology 50A-50B. Upper division requirements: a minimum of 24 upper division units i sociology, including Sociology 103, 105, 108 and 152.

A *teaching major* is not offered in sociology; however, courses in sociology may b used as part of the *social science major* for the general junior high school credentia or the general secondary credential. For specific information, refer to the outlines o requirements for these credentials.

### Minor

A *liberal arts minor* is offered in sociology. The minor must include at least 1 units of work in sociology, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in sociology for the general secondary credential however, courses in sociology may be used as part of the *social science minor* for th general junior high school, the special secondary, the general elementary, and th kindergarten-primary credentials. For specific information, refer to the outlines c requirements for these credentials.

### Lower Division Courses

**50A. Introduction to Sociology**

A study of modern social problems recognizing the geographic, economic, psych logical, and sociological factors involved. Emphasis is on a scientific method c approach. An evaluation of various causes and solutions of problems is made. A pr requisite for upper division courses in sociology. Sophomore standing required. N open to students who have credit for Sociology 40.

Fall or Spring (3)

**50B. General Sociology**

The development and use of the concepts of sociological analysis, such as huma nature, the effects of isolation and social contacts upon the development of personalit social interaction; social processes; social forces; social control; collective behavio and social progress. A prerequisite for upper division courses in sociology. Sophomo standing required.

Fall or Spring (3)

### Upper Division Courses

**103. Introduction to Social Research**

Quantitative and nonquantitative methods of research in the social sciences; stu and practice in the use of the schedule, questionnaire, case study and social survey; al tabular and graphic presentation, analysis of frequency distributions, sampling and co relation techniques. Prerequisites: Mathematics A-B and Sociology 50A-50B. Th course is a prerequisite for other upper division courses in sociology except for So ology 108.

Fall (3)

**105. Social Pathology**

A study of the alleged abnormal phenomena in society; family disorganizati and personal demoralization; pathology of individual and group relationships and economic, social, and cultural relationships. Prerequisite: Sociology 50A-50B and 10

Spring (3)

**106. Criminology and Penology**

The extent and characteristics of crime; consideration of physical, mental, ec nomic, and sociological causes of crime; study of methods of penal discipline, pris labor, parole, and probation; programs of prevention. Prerequisite: Sociology 50A-5 and 103.

Fall (3)

### 07. Juvenile Delinquency

A study of the causative factors of antisocial behavior from the viewpoints of onomics, psychology and sociology. Particular emphasis will be placed upon the influ- nce of the school, home and neighborhood. Protective and remedial measures such as e Visiting Teacher, Juvenile Court, Probation, Parole and Reformatories will be tudied. Prerequisite: Sociology 50A-50B and 103.

Spring (3)

### 08. Marriage and the Family

Preparation for marriage. Prediction scales for evaluating success or failure in arriage. Parent-child relationships; factors in successful and unsuccessful marriages; gher education and the birth rate; married women in industry and professions; deser- on and divorce. Not open to students who have had Sociology 45 or 55. Prerequisite: ) units of credit.

Fall or Spring (3)

### )9. Fields of Social Work

A survey of the nature of social work and the various kinds of social work which e found in the modern urban life. The student is familiarized with the various social encies in the community, their problems and methods of work, by readings and field ips. Volunteer social work in some social agency recommended. Prerequisites: Soci- ogy 50A-50B and 103.

Spring (3)

### 0. Race Relations

A study of the Negro, Oriental, and other minority groups in the United States. study of mental capacities, education, cultural achievement, family life, delinquency d other social factors of each group. Race prejudice, racial consciousness, theories of cial superiority and inferiority will be considered. Prerequisite: Sociology 50A-50B d 103.

Fall or Spring (3)

### 5. Population Problems

Problems of population increase, migration, shifts in composition of population ative to age, sex, and racial distribution. Population practices and theories. Biolog- l and geographical aspects of population problems. International population move- nts. Prerequisite: Sociology 50A-50B and 103.

Spring (3) (Offered in 1947-48 and alternate years)

### 2. History of Social Thought

The origin and development of social theory in Europe and America; consider- on of the fields and specialization and research in contemporary American sociology. erequisite: Sociology 50A-50B and 103.

Spring (3) (Offered in 1948-49 and alternate years)

### Community Welfare Organization

An analysis of the structure and process of community organization for social lfare as well as the functional relationships between public and private welfare ncies. Field work will be required to study some of the social agencies of San Diego. requisite: Sociology 50A-50B and Sociology 103.

Fall or Spring (3) (Offered in 1947-48 and alternate years)

### Urban Sociology

A study of the structure and function of the modern city; types of neighborhoods; ms of recreation; social forces in a metropolitan area; types of urban personalities groups; rural-urban conflicts of culture. Practical field studies required. Prerequi- : Sociology 50A-50B and 103.

# SPANISH

## IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *liberal arts major* is offered in Spanish. Lower division requirements: Spa ish A-B-C-D; French A-B or German A-B; History 4A-4B or 8A-8B. Upper divisi requirements: a minimum of 24 upper division units, at least 21 units of which mu be in Spanish, including Spanish 199. The remaining 3 units may be selected fro Geography 116, 118; History 161, 162; or Comparative Literature 155 or 1 in consultation with the departmental representative. An average grade of C or bett in upper division major courses is required.

A *teaching major* is offered in Spanish for the general junior high school cr dential. For specific information, refer to the outline of requirements for t credential.

### Minor

A *liberal arts minor* is offered in Spanish. The minor must include at least units of work in Spanish, 9 units of which must be from courses carrying upp division credit.

A *teaching minor* is offered in Spanish for the general secondary, the gene junior high school, the special secondary, the general elementary, and the kindergart primary credential. For specific information, refer to the outlines of requirements these credentials.

### Lower Division Courses

**A-B. Elementary**

Intensive study of Spanish grammar and syntax, with daily written wor class drill in conversational idiom and pronunciation; reading with oral discuss and résumés; dictation; introduction to contemporary prose writers. Credit given for Spanish A unless followed by Spanish B. Students who have had one y of Spanish in high school should register for Spanish A for which only two un will be allowed. Those who have had two years of Spanish in high school sho register for Spanish B for which only four units will be allowed. For specific inf mation, refer to page 17. Spanish A, or its equivalent, is a prerequisite to Spanish

Year course (5-5)

**C-D. Intermediate Spanish**

Reading and composition: study of standard prose as basis for class wo collateral reading in prose and drama, with written reports in Spanish; dictati Class work conducted mainly in Spanish. Individual conferences. Prerequisite for Spanish B or three years of high school Spanish. Prerequisite for D: Spanish C four years of high school Spanish.

Year course (3-3)

**50. Spanish Commercial Correspondence**

A one-semester intermediate course in Spanish composition, directed along line of commercial correspondence. A practical course, with translation of busin letters, and supplementary reading in Spanish on commercial subjects. Prerequis Three years of high school Spanish, or completion of Spanish B. This course substitute for Spanish C in the C-D sequence.

Fall (3)

**70. Spanish for Elementary-School Teachers**

Elementary Spanish to meet the needs of elementary-school teachers. Empha on the oral aspects of the language with reading centering around Mexico. No requisite. Open only to students enrolled in the general elementary school curricul

Spring (5)

### Upper Division Courses

**101A-101B. Conversation and Composition**

Translation into Spanish of moderately difficult English prose passages. F composition in Spanish. Outside reading of modern Spanish plays, with writ reports in Spanish. Oral practice in colloquial Spanish with extensive use of pho graph recordings. Prerequisite: Spanish D, or its equivalent, with grade of C.

Year course (3-3) (Offered in 1949-1950)

**02A-102B. Introduction to Spanish Classics**

Reading from several types of classical literature. Lazarillo de Tormes and ther novels of Roguery; selections from Don Quixote, and the Cien Mejores Poesias astellanas; one drama each from the works of Lope de Vega, Calderon, Alarcon, nd Moreto; collateral reading and reports. Prerequisite: A grade of C in Spanish D r permission from the instructor.

Year course (3-3) (Offered in 1949-1950)

**4A-104B. Spanish-American Literature**

Reading from representative Spanish-American authors during the colonial volutionary and modern periods. Lectures, class reading, collateral reading and ports. Prerequisite: A grade of C in Spanish D or permission from the instructor. udents who do not read Spanish may take this course for credit in comparative erature, doing the required reading in English translation.

Year course (3-3)

**5A-105B. Modern Spanish Drama**

The development of the drama of Spain from the beginning of the nineteenth ntury to the present time. Prerequisite: A grade of C in Spanish D or permission om the instructor.

Year course (3-3) (Offered in 1950-1951)

**0A-110B. Novel and Short Story in Spain**

The development of the novel and short story in Spain from 1830 to the esent time. Prerequisite: A grade of C in Spanish D or permission from the structor.

Year course (3-3)

**9. Comprehensive Reading and Survey Course**

Designed to fill up the gaps in the reading done in courses. Class meeting once veek for guidance, reports, and quizzes. Required of all seniors majoring in Spanish.

Spring (3)

# SPEECH ARTS

## IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *liberal arts major* is offered in speech arts. Lower division requirements: a nimum of 15 units of lower division courses in speech arts, specializing in the d of dramatic art, public speaking or a guided combination of the two. Upper ision requirements: a minimum of 24 upper division units including Speech Arts ); 6 units selected from 155, 140A-140B, 179A-179B, 192A-192B (the first semesters any of these courses may be combined); 6 units selected from 157A-157B, 158A-B, 159A-159B, 161 and 191, or combinations of the first semesters of any of these rses: 6 units selected from 152, 154A, 154B, 108, 118A, 192A, 192B.

A *teaching major* is offered in speech arts for the general secondary and the cial secondary credentials. For specific information, refer to the outlines of requirents for these credentials.

### Minor

A *liberal arts minor* is offered in speech arts. The minor must include at least units of work in speech arts, 9 units of which must be from courses carrying upper sion credit.

A *teaching minor* is offered in speech arts for the general secondary, the general ior high school, and the special secondary credentials. It may be offered only as econd teaching minor for the general elementary and the kindergarten-primary lentials. For specific information, refer to the outlines of requirements for these lentials.

## Lower Division Courses

### 1. Voice and Diction

Exercises and drills to improve the quality, flexibility and effectiveness of th speaking voice leading to good usage in standard American speech. Preparatory to fu ther courses in public speaking and dramatic art.

Spring (3)

### 2A. Fundamentals of Public Speaking

Training in fundamental processes of oral expression; method of obtaining an organizing material; outlining principles of attention and delivery; extemporaneou speaking and open forum debating; practice in construction and delivery of type form of speech.

Fall or Spring (3)

### 2B. Extemporaneous Speaking (or Forum Speaking)

Practice in extemporaneous speaking on subjects of current interest, both nation and local, with stress laid on the organization and delivery of content material. Foru discussion will provide speakers with the opportunity of assembling facts quickly meet such questions as any audience situation might demand.

Fall or Spring (3)

### 11A. Interpretation

Application of the principles involved in "making words come alive": respon to thought and mood, sensory association, emphasis, climax. Practice selections poetry and prose.

Fall or Spring (3)

### 11B. Interpretation

Application of techniques of interpretation to poetry of various types: balla odes, sonnets, dramatic monologues, free verse. Prerequisite: 11A, or equivalent.

Fall or Spring (3)

### 20. Corrective Speech

Corrective laboratory training prescribed on the basis of vocalization tests ma on recording machine. Required of education majors who fail to meet speech requi ments test. Private clinical assistance given to stutterers and lispers.

Fall or Spring (1) (9 weeks' course)

### 55A-55B. Elementary Acting

The fundamentals of voice and pantomime applied to the problems of charact ization in group scenes in modern plays. The aims of this course include the discove and development of talent and the understanding of the problems of the actor for dir tors and teachers. Acting experience is available in workshop productions and also the major productions of the department. (Speech Arts 55A prerequisite for Spee Arts 55B).

Year course (3-3)

### 56A-56B. Dramatic Production

A general survey of the process of play production for lower division stude planned to introduce them to the whole organization of the college and school theat with particular emphasis on back-stage methods and practice, including stagecraft a elementary lighting. Technical crews for the departmental productions are taken fr this class. (56A is a prerequisite for 56B.)

Year course (3-3)

### 57A-57B. Radio Production

A course presenting the background, theory and fundamentals of broadcasti Basic material for radio speaking and writing. 57A is a prerequisite for 57B.

Year course (2-2)

### 60A-60B. Argumentation and Debate

Obtaining and organizing of evidence and the construction and use of the bri study and discussion of current issues; the presentation of formal and informal debat Attention to intramural and intercollegiate debating.

Year course (3-3)

### 1A-61B-61C-61D. Intercollegiate Debate

Fall or Spring (1-1-1-1)

### 3A-63B-63C-63D. Verse Choir

Participation in verse speaking chorus to develop quality, range of tone, and bility in dramatic visualization of poetry. Required for speech arts credential.

Fall or Spring (1-1-1-1)

## Upper Division Courses

### 08. Advanced Interpretation

Analysis of techniques of literary composition as guides to oral interpretation. chievements of the creative artist as they affect the interpretative artist. Prerequi- te: One year of college speech or equivalent.

Fall or Spring (3)

### 18A-118B. Playwriting

The first semester of this course deals with the one-act play, its problems and tech- ique. A number of one-act plays are analyzed and creative writing in this medium is ncouraged. Plays written by the students are read and discussed in class during their eriod of development. Students will have an opportunity to see their plays produced. he second semester continues with analyses of long plays and assumes that the stu- ents are planning a continuous program of writing. (118A is a prerequisite for 118B permission of instructor.)

Year course (3-3) (Not offered in 1948-1949)

### 0A-140B. Stage Design

The application of the principles of design, color and perspective to the design settings for the production of period and modern plays. Students will learn to make etches and models and paint the scenery for the departmental productions. Prerequi- te: 56A-56B or equivalent.

Year course (3-3)

### 5. Stage Lighting

A course for directors, designers and technicians in school and community thea- rs concerning the principles and practice of light, color, lighting instruments, and ntrol equipment, including the design and planning of lighting of plays. Students will rve as light crews for departmental production.

Spring (3)

### 0. Phonetics

Auditory and kinesthetic analysis of the sounds of the English language. Valu- le as a corrective course in pronunciation and articulation. Required of speech majors d those seeking the Speech Correction Credential.

Fall (3)

### 2. Stage Costume

Principles of design of stage costume. Consideration of materials, color, and dye- g. Study of history of costume of important periods. Projects in design of costumes r plays of various periods.

Fall (2) (Not offered in 1948-49)

### 4A-154B. History of the Theater

A study of the theater from primitive times to the present. Special attention will given to the theater as a mirror of the social and cultural background of the various untries and periods in which it is studied. Carries aesthetics credit. (Speech Arts 4B may be taken without 154A.)

Year course (3-3) (Not offered 1948-1949)

### 5. Advanced Acting

More advanced forms of dramatic expression are studied. Acting of different riods and countries in workshop productions. Prerequisite: 55AB or the equivalent.

Fall (3)

### 156. Advanced Dramatic Production

Problems and projects in scenery and lighting in connection with the workshop and major productions of the department.

Offered in summer session only (3)

### 157A-157B. Advanced Radio Production

Preparation and production of radio plays and various types of radio material. Prerequisite: 57A-57B. (157A is a prerequisite for 157B or permission of instructor.)

Year course (3-3) (Offered in 1948-1949 and alternate years)

### 158A-158B. Advanced Radio Techniques

Designed to enable students to specialize in different fields of radio. Special attention given to original work. Prerequisite: 57A-57B. (158A is a prerequisite for 158B.)

Year course (3-3) (Offered in 1947-1948 and alternate years)

### 159A-159B. Stage Direction

This course is planned for prospective directors of plays in schools, colleges and community theaters. Through lectures, discussions, and exercise projects the student will become acquainted with the principles, procedure and methods of stage direction. Each student will be required to direct several short plays during the year (159A is a prerequisite for 159B.)

Year course (3-3)

### 161. Advanced Argumentation

Presents a further and more detailed study in the preparation of briefs and the organizing of evidence; opportunity for participation in intramural debates, intercollegiate debate, and community speaking activity. Prerequisite: 2A or 2B.

Fall (3)

### 179A-179B. Nervous Speech Disorders

Clinical survey of newest methods of speech correction with special emphasis given to stammering. Required course for Special Corrective Credential. Not open to students with credit in Educ. 179A-179B. (Speech Arts 179A is a prerequisite for 179B.)

Year course (3-3)

### 191. Organized Discussion

Consideration of the symposium, the panel, the open forum, the business session, and varieties of conference speaking. Emphasis upon organization and presentation. Attention to parliamentary procedure for informal groups. Prerequisite: Speech Arts 60 or equivalent.

Spring (3)

### 192A-192B. Advanced Public Speaking

Careful attention given to the preparation and delivery of longer speeches, using as models classics in the field of oratory. Prerequisite: 2A or 2B.

Year course (3-3) (Not offered 1948-1949)

### 199. Special Problems in Speech and Dramatic Art

Fall or Spring (1-3)

## Graduate Courses

### 200. Seminar in History of Oratory

An advanced course for those already familiar with the techniques and theories of public speaking and debate. A history of public address from the time of Greece up to the present, organized around the theories of representative orators and their relationships to the social environment. Prerequisite: Graduate standing.

Spring (2) (Offered in 1949-1950)

### 221. Articulatory Problems of Speech

Analysis and discussion of articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Prerequisite: Speech Arts 150 and graduate standing.

Fall (2)

### 245. Seminar in Technical Practice

Advanced technical projects in planning school theaters and their mechanical equipment, lighting control and lighting instruments and the design of lighting layouts for elaborate plays will be assigned, executed and discussed. Prerequisite: Graduate standing.
(2)

### 259. Seminar in Stage Direction

An advanced course for those who are ready to direct full-length plays and to consider the problems of handling various styles and types of drama in the great periods of dramatic literature for modern production. For graduates with experience in directing plays. Prerequisite: Graduate standing.
Fall (2) (Offered 1949-1950)

### 260. Seminar in Oral Interpretation

Application of the aesthetic discipline to the oral reading of masterpieces of poetry and prose. Projects will include analysis of thought and emotional content and aesthetic form, including unity and harmony, variety and contrast, balance and proportion, rhythm, and the interpretation to an audience of the results of the study. Prerequisite: Graduate standing.

# ZOOLOGY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *liberal arts major* is offered in zoology. Lower division requirements: Zoology 1A-1B; Chemistry 1A-1B or 2A-2B. Recommended: German or French; Botany 2A-2B, 4. Upper division requirements: a minimum of 24 upper division units, at least 18 units of which must be in zoology and 6 units of which may be in related courses in botany, chemistry, physics, physiology, or bacteriology selected with approval of the departmental representative.

A *teaching major* is not offered in zoology; however, courses in zoology may be used as part of the *life science major* for the general secondary credential or as part of the *general science major* for the general junior high school credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *liberal arts minor* is offered in zoology. The minor must include at least 15 units of work in zoology, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in zoology; however, it may be used as part of the *teaching minor in life science* for the general secondary credential, or as part of the *teaching minor in general science* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. General Zoology**

An introduction to animal biology dealing with structures, functions, evolution of animal life. Designed primarily for those who expect to do advanced work in the department. Two lectures and 6 hours of laboratory work each week. Students who have credit for Biology 10A-10B do not receive credit for Zoology 1A but may for Zoology 1B. Prerequisite for Zoology 1B: Biology 10B or Zoology 1A.

Year course (4-4)

**8. Human Anatomy**

A study of human structure through the use of models, prepared dissections and microscope slides. Prerequisite: high school biology, Biology 10A, 1, or Zoology 1A. Two hours of lecture and three hours of laboratory per week. Required of prenursing students. Credit reduced to 2 units if student has credit for Zoology 20.

Fall (3)

**20. Human Anatomy and Physiology**

An elementary course in human anatomy and physiology. Prerequisite: High school biology, or Biology 1 or 10A or Zoology 1A. Lectures three hours per week. Credit reduced to 2 units if student has credit for Zoology 8 or Physiology 1A.

Fall and Spring (3)

### Upper Division Courses

**100. Embryology**

The development of vertebrates as illustrated by the frog, chick, and pig. Six hours of laboratory and two hours of lecture and quiz per week. Prerequisite: Zoology 1B or Biology 10B.

Spring (4)

**101. General Physiology**

Fundamentals of plant and animal functions. Two lectures and two laboratory periods per week. Prerequisites: Biology 10A-10B or Zoology 1A-1B, Chemistry 1A-1B or Chemistry 2A-2B.

Fall (4)

**104. Microtechnique**

Introduction to methods of preparation of tissues for microscopic study. Six hours of laboratory and one hour of lecture per week. Prerequisite: One year college chemistry and Zoology 1A-1B, Botany 2A-2B or Biology 10A-10B.

Fall or Spring (3)

### 06. Comparative Anatomy of the Vertebrates

Dissection, study and comparison of organ systems of typical vertebrates. Two ours per week of lecture and six hours of laboratory. Prerequisite: Zoology 1B or iology 10B.

Fall (4)

### 12. Marine Invertebrates

Identification and study of behavior and life histories of invertebrates of the San iego region. Frequent collecting trips to the beaches required. Prerequisite: Zoology A or Biology 10B. Two hours of lecture and six hours of laboratory or field work er week.

Fall (4)

### 13A. Mammalogy

Lectures on classification, adaptations, and ecological relationships of mammals. aboratory and frequent field trips to familiarize the student with the local mam- als, taxonomic procedures and field techniques. One lecture and six hours of laboratory er week. Prerequisites: Zoology 1A or Biology 10B.

Spring (3)

### 3B. Ornithology

The study and identification of birds, especially those of the Pacific Coast and e San Diego region. One hour of lecture and six hours per week of laboratory, or ld excursions. Prerequisite: Zoology 1B or Biology 10B.

Spring (3)

### 4. Evolution

The development of theories of evolution. Two lectures per week.

Spring (2)

### 5. Cold-blooded Vertebrates

The classification, natural history and distribution of fishes, amphibians, and ptiles with special reference to the local fauna. Practice in the techniques of collec- on and the use of keys for identification. Frequent field trips. One lecture and two boratory periods per week. Prerequisites: Zoology 1B or Biology 10B.

Spring (3)

### 1. General Entomology

The classification, life history, structure, and physiology of insects. Prereq- site: Zoology 1A or Biology 10B. Two hours of lecture and three hours of laboratory r week.

Fall (3)

### 2. Systematic Entomology

Classification of insects with especial emphasis on a group of insects of the ndent's choice. To be taken with or to follow 121. May be repeated for credit but th a total of not more than 3 units. Three to six hours of laboratory work each ek.

Spring (1 or 2)

### 3. Economic Biology

Study of the uses of plants and animals to man and the ways in which they ure him and his possessions. Consideration is also given to general methods of ntrol and conservation. Prerequisite: Zoology 1A, Biology 1, or Biology 10B. Not en to students who have credit in Botany 123.

Fall (2)

### 4. Scientific Illustration

Drawing or photography of scientific subjects. Students are assigned individual jects, following their respective inclinations. It is desirable for students electing s course to have a definite project, or projects in mind and to confer with the

instructor in advance in case specialized needs are required. Six hours of laboratory work per week. Not open to students who have credit in Botany 124.
Fall (2)

### 125. Economic Entomology

A course designed primarily for students of agriculture, horticulture, and their specialized fields, but also of use and value to those majoring in the biological sciences. Emphasis is placed on determination and control of insects affecting plants and their products. Quarantine measures are also studied. Two lectures and one laboratory period per week. Prerequisites: Zoology 1A or Biology 10B.
Spring (3)

### 126. Medical Entomology

The role of insects and other arthropods in transmission and causation of human diseases. Three hours of laboratory and two hours of lecture per week. Prerequisite: Zoology 1A or Biology 10B.
Fall (3)

### 130. Readings in Biology

Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles, ecology, economic zoology, zoogeography, breeding habits, animal behavior. Not open to students who have credit in Botany 130.
Spring (2)

### 131. Field Zoology

Designed to give a working knowledge of the more common animals in the Southern California fauna; field trips emphasizing both observational methods in the study of behavior and habitat relations, and collecting techniques; laboratory to include identification of species, preparation of animal for exhibition and study; lectures on taxonomy, adaptations and ecological relationships. Prerequisites: Course in biology in high school or college, or permission of the instructor.
Summer (4)

### 140. Histology

A study of the microscopic structures and differentiation of tissues and organs of the vertebrates, especially mammals. One lecture and 6 hours of laboratory per week. Prerequisites: Zoology 1A-1B, or Biology 10A-10B; recommended Zoology 100.
Fall (3)

### 155. Genetics

An introductory course to the principles of heredity and cytogenetics, including the genetics of man, other animals, and plants. Designed primarily for science majors. Two lectures per week. Not open to students who have taken Zoology 165. Prerequisite: Biology 10A-10B, Zoology 1A-1B, or Botany 2A-2B. Not open to students who have credit in Botany 155.
Spring (2)

### 165. Human Heredity

Presentation of selected principles of heredity as related primarily to human inheritance. Designed primarily for non-science majors. Two lectures per week. Not open to students who have taken Zoology 155, Genetics (formerly 114A).
Fall (2)

### 199. Special Study

Work other than is outlined in the above courses. Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least 15 units of Zoology with a grade of A or B.
Fall or Spring (1 or 2)

## Graduate Courses

### 00. Seminar

To be conducted by the various members of the staff, with adaptation to the eeds of the class and its background. Especial emphasis will be placed on current oncepts in the various fields of Biology including problems of migration, distribution, peciation, evolution. Required of all graduate students. Prerequisite: Graduate tanding.

Fall (2)

### 02. Hydrobiology

A course in aquatic ecology with special emphasis on fresh water but with refer- nce to marine biology. Prerequisite: Graduate standing.

(2)

### 13. Advanced Studies in Ornithology

Lectures and seminar on advanced problems of morphology, distribution, behavior nd classification of birds. Prerequisite: Graduate standing.

(2)

# PROVISIONAL CURRICULUM

This curriculum is for the purpose of assisting provisional students in attainin regular status in a curriculum which leads to the A.B. Degree. Students in the provisional program are given close supervision in selection of courses and are place in classes specially designed to aid in adjustment to the college program.

Reclassification to regular status may be obtained upon the completion of a least 24 units of work of "C" grade with an over-all grade point average of 1.0, o upon recommendation of a reclassification committee. Reclassification must ordinaril take place within the first two years of college work. Students having provisiona status are permitted a maximum of five semesters of attendance.

The courses in the provisional curriculum are open only to students in provisional status. Provisional students in their first college year must select thre courses each semester from the list of subjects in the provisional curriculum. All othe courses selected to complete the student's program may be chosen from the regula schedule of courses or from additional courses in the provisional curriculum with th approval of the adviser.

## A SUGGESTED PROGRAM FOR PROVISIONAL STUDENTS

### First Year

| | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem* |
| * English 41, English Composition, and 42, Freshman Literature | 3 | 3 |
| Physical Science 40, Man and His Physical World, or equivalent (see lower division requirements, page 17) | – | 3 |
| Biology 40, Man and His Biological World, or equivalent (see lower division requirements, page 18) | 3 | – |
| Social Science 40, Contemporary Problems | 3 | – |
| Sociology 45, Marriage and the Family | – | 3 |
| Health Education 21, Principles of Healthful Living | – | 2 |
| Psychology 40, Psychology and Life | 3 | – |
| Physical Education (activity courses) | ½ | ½ |
| Elective | 3 | 4 |
| | 15½ | 15½ |

### Second Year

Student should consult with adviser concerning lower division preparation fo the major and completion of lower division requirements.

| | | |
|---|---|---|
| English 45, Biography, 46, Contemporary Literature, or 47, Periodical Literature | 3 | – |
| Social Science Elective | 3 | – |
| Social Science 45, American Democracy | – | 3 |
| Elective | 9 | 12 |
| Physical Education (activity courses) | ½ | ½ |
| | 15½ | 15½ |

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* Students who do not pass the English A qualifying examination must registe in English 40, Pre-College English, which is a prerequisite for English 41. Credit i English 40 may be counted toward graduation as an elective but not to satisfy lowe division English requirements.

# COURSES OF INSTRUCTION

## BIOLOGY

### 40. Man and His Biological World

A survey of the general field of biology with emphasis on the role of biological science in the welfare of man and his associates, consisting of three lectures and one demonstration period per week. This course may be counted as the equivalent of Biology 1.

Fall or Spring (3)

## ECONOMICS

### 45A-45B. Business Economics

A basic course in the general principles of business economics and the application of these principles to current problems of man's economic life. An interpretation of basic economic theories to everyday vocational and business practices. Special studies made of business and industrial concerns with respect to their organization, production methods, economic policies, and types of governmental control. Students earning grades of A or B in this course may use it to satisfy the requirement of Economics 1A-1B in the commerce major. It may not be used to satisfy the economics requirement in any other field. (Not open to freshmen except by permission of the instructor.)

Year course (3-3)

## ENGLISH

### 40. Pre-College English

The elements of composition, including drill in grammar and usage; exercises in vocabulary building and fundamental reading skills; theme writing. Credit in this course is equivalent to passing the English A qualifying examination and may be counted toward graduation as an elective but not to satisfy lower division English requirements.

Fall or Spring (3)

### 41. English Composition

Composition stressing exposition. Reading from essays and articles. Prerequiites: Passing mark in the English A qualifying examination or credit in English 40. English 41 may be counted as the equivalent of English 1.

Fall or Spring (3)

### 2. Freshman Literature

Literature, mainly contemporary, is read for its thoughts and ideas, especially in relation to human problems and their solution. Practice in writing is continued. Required of all provisional students. Prerequisite: English 41. The course in English 2 may be counted as the equivalent of English 2.

Fall or Spring (3)

### 5. Sophomore English: Biography

Composition stressing personal narrative and informal essay. Reading from field f biography and memoirs. Prerequisite: English 41 and 42.

Spring (3)

### 6. Sophomore English: Contemporary Literature

Study of contemporary literature, with emphasis on various forms, such as the ovel, poetry, drama, etc., as used by the principal writers of the twentieth century world. The main objective of the course is to give students a background for the major ortion of their reading beyond college. Prerequisite: English 41 and 42.

Fall (3)

### 7. Sophomore English: Periodical Literature

Composition stressing the writing of essays and articles. Reading from current periodical literature. Prerequisite: English 41 and 42.

Fall (3)

## PHYSICAL SCIENCE

### 40. Man and His Physical World

A brief survey of the nature of the scientific method and of selected topics i physical science. Materials will be chosen from physics, chemistry, astronomy, an geology in order to give some background for an understanding of the relations c physical science to modern life. Not open to students who have had a year course i high school chemistry, physics, geology, or astronomy or a college course in any c these subjects. This course may be counted as the equivalent of Physical Science 1

Fall or Spring (3)

## PSYCHOLOGY

### 40. Psychology and Life

An elementary survey of normal adult psychology, focused upon psychologic principles in relation to life situations. Open only to students enrolled in the Pr visional curriculum. This course may be counted as the equivalent of Psychology 1.

Fall or Spring (3)

## SOCIAL SCIENCE

### 40. Contemporary Problems

A survey of the major political, social, and economic forces in modern Americ life. Chief problems are analyzed in relation to their setting, and students are giv sound methods of approach in dealing with them. This course may be counted as t equivalent of Sociology 50A.

Fall or Spring (3)

### 45. American Democracy

The structure and function of government, as it relates to individual America Special emphasis on popular participation through voting, political parties, pressu groups, and public opinion. Prerequisite: Sophomore standing.

Spring (3)

## SOCIOLOGY

### 45. Marriage and the Family

The purpose of this course is to prepare young people for successful marriage a family life. The development of the personality through family relationships, the choi of a life partner, and the social and economic factors involved in the establishment o home, are given special emphasis. The importance of the family as a unit in larger soc groupings is stressed, and both psychological and material factors which affect the w fare of family members are brought to the student's attention. Prerequisite: Psycholo 40 or sophomore standing.

Fall or Spring (3)

# DIRECTORY

(1947-48)

EPNER, WALTER R.---------------------------------------------President

A.B., 1913, M.A., 1916, Ed.D., 1937, University of Southern California. At San Diego State College since 1935.

CKLEY, JOHN WILLIAM------------------Assistant Professor of Speech Arts

A.B., 1930, University of Redlands; A.M., 1933, and two years of graduate study at the University of Southern California. At San Diego State College since 1947.

DAMS, JOHN R.-----------------------------------------Professor of English

A.B., 1920, A.M., 1922, University of Michigan; Ph.D., 1940, University of Southern California. At San Diego State College since 1928.

LCORN, MARVIN DOUGLAS----------------Associate Professor of Education

A.B., 1925, Southwestern College; A.M., 1931, Teachers College, Columbia University; Ed.D., 1942, University of Southern California. At San Diego State College since 1941.

LLISON, JOHN DONALD---------------------Assistant Professor of Commerce

B.S.C., 1932, Temple University; M.B.A., 1935, Harvard University; one year graduate study at New York University. At San Diego State College since 1947.

MSDEN, GEORGIA C.--------------------------Associate Professor of Commerce

Diploma, Gregg College, Chicago; special secretarial training in various colleges; Traveling Representative and Secretary for the Federal Board for Vocational Education, France, World War I; in charge of Stenographic Division, Department of Personnel, American Red Cross Headquarters, Paris, France, World War I; Secretary, Standard Life and Accident Insurance Company, Detroit. At San Diego State College since 1925.

PPLE, JOE ALTON------------------Principal of Campus Elementary School; Associate Professor of Education

A.B., 1928, Southeastern State College; M.A., 1929, University of Oklahoma; Ed.D., 1941, Teachers College, Columbia University. At San Diego State College since 1947.

SCHMANN, H. HOMER-----------------------Assistant Professor of Geography

B.A., 1940, M.A., 1942, University of California at Los Angeles. One-half year graduate study at University of California. At San Diego State College since **1946.**

ACON, GUINIVERE KOTTER (Mrs. George)---Associate Professor of Education

B.S., Utah Agricultural College; M.A., Stanford University. One year graduate study since 1926 at Stanford University, Teachers College of Columbia University, University of Southern California, and University of California at Los Angeles. At San Diego State College since 1928.

AIRD, OSCAR-------------------------------------------Professor of Physics

B.A., 1910, University of Wisconsin; M.A., 1924, University of California. Three years graduate study since 1924 at University of Minnesota, University of California, University of Southern California, University of Oregon. At San Diego State College since 1921.

ALL, HANNAH WHEELER--------------------------------Instructor in English

B.A., Macalester College; M.A., Wellesley College; one year graduate study at University of California. At San Diego State College since 1947.

BAKER, CLIFFORD H., JR.------------------------------Instructor in Spanish

B.A., 1933, San Diego State College; M.A., 1935, University of California. Two years graduate study since 1935 at University of California. At San Diego State College since 1937.

ARNHART, KENNETH EDWIN------------------------Professor of Sociology

A.B., 1915, Southwestern University; A.M., 1920, Southern Methodist University; Ph.D., 1924, University of Chicago. At San Diego State College since 1939.

AUM, DONALD ELWOOD-------------------------Assistant Professor of Music

B.Music, A.B., 1935, Upper Iowa University; M.A., 1946, University of Iowa. At San Diego State College since 1947.

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On leave 1946-1948.

BEATTY, LESLIE S. (Mrs. Roger) -------------- Assistant Professor of Educatio

A.B., University of California; M.A., Claremont Colleges. Two years graduat study at University of California and San Diego State College. At San Dieg State College since 1946.

BENSON, RICHARD M. -------------------------------- Instructor in Sociolog

B.S., 1923, Oregon State College; M.A., 1925, University of Washington; Ed.D. 1931, Stanford University. At San Diego State College since 1946.

BENTON, CARL WEBBER -------------- Acting Instructor in Physical Educatio

B.S., 1948, University of California at Los Angeles. At San Diego State Colleg since 1948.

BLOCK, EDWARD A. ------------------------------ Assistant Professor of Englis

A.B., 1938, M.A., 1939, Ph.D., 1943, University of California. At San Dieg State College since 1946.

BROOKS, BAYLOR ------------------------------ Assistant Professor of Geolog

B.A., 1928, Stanford University. Two years graduate study since 1928 at University of Arizona and Stanford University. At San Diego State College sinc 1931.

BROWN, ELIZABETH McPIKE (Mrs. L. P.) --------------- Professor of Frenc

Ph.B., M.A., Ph.D., University of Chicago; one year graduate study at th Sorbonne, Paris, France; Certificat d'Etudes Françaises; Diplôme de l'Association Générale de Phonétique, Paris, France; Officer d' Académie. At Sa Diego State College since 1926.

BROWN, EUGENE P. ------------------------- Assistant Professor of Commerc

B.S., 1926, Southeastern Teachers College; B.A., 1927, M.A., 1928, Universit of Oklahoma. One year graduate study at University of Chicago, Universit of Southern California and University of Mexico. At San Diego State Colleg since 1947.

BROWN, LESLIE PARKER ------------------- Professor of Spanish and Frenc

B.A., 1912, Yale College; M.A., 1913, Harvard University; Ph.D., 1935, University of Southern California. At San Diego State College since 1922.

* BRYDEGAARD, MARGUERITE ANNA -------- Assistant Professor of Educatio

A.B., San Diego State College; M.A., Claremont Colleges. At San Diego Stat College since 1936.

BUCHANAN, DOROTHY ANNE ------------------ Assistant Professor of Englis

A.B., Smith College; M.A., Ph.D., Bryn Mawr College. At San Diego Stat College since 1947.

BURHANS, ARTHUR DANIEL ------------ Acting Assistant Professor of Physic

B.S., 1916, U. S. Naval Academy; M.S., 1923, Columbia University. At Sa Diego State College since 1947.

BURNETT, GAIL ALLEN ------------------------ Assistant Professor of Englis

A.B., Randolph-Macon Woman's College; M.A., University of California a Los Angeles; Ph.D., University of Southern California. At San Diego Stat College since 1947.

BUSH, KENT -------------------------------------- Acting Instructor in English

A.B., 1941, San Diego State College; one year graduate work, University o California at Los Angeles. At San Diego State College since 1947.

BUTTE, ROSEMARY ------------------------------ Assistant Professor of English

B.A., Scripps College; M.A., University of California at Los Angeles; thre years of graduate work at Claremont Colleges and University of Southern California. At San Diego State College since 1947.

CAMERON, ROY ERNEST ------------------------------ Professor of Economic

A.B., 1922, Ph.D., 1929, University of California. At San Diego State College since 1929.

CAMPBELL, LOIS BERYL -------------------- Assistant Professor of Education

A.B., University of California; M.A., Teachers College, Columbia University. At San Diego State College since 1947.

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* On leave 1947-1948.

**CANADAY, DYXIE D.**---------- Instructor in English

B.S., M.A., Oklahoma A. and M. College; one year graduate study at Stanford and University of Southern California. At San Diego State College since 1946.

**CARLSON, THORSTEN ROBERT**---------- Associate Professor of Education

B.E., 1939, St. Cloud State Teachers College; M.A., 1942, Ph.D., 1946, University of Minnesota. At San Diego State College since 1948.

**CAVE, MARY F.**---------- Assistant Professor of Physical Education

B.S., University of North Dakota; one-half year's study at Bennington College. At San Diego State College since 1946.

**CHASTAIN, NANCY ANN**---------- Acting Instructor in English

B.A., San Diego State College; one year of graduate study at University of California. At San Diego State College since 1947.

**CHOPLIN, ROSA MARIA** (Mrs. Ralph)---------- Acting Instructor in Spanish

A.B., University of California at Los Angeles; one year graduate study at University of Southern California. At San Diego State College since 1948.

**COLTON, THEODORE S.**---------- Instructor in English

B.A., 1939, M.A., 1940, and two years' graduate study, University of California at Los Angeles. At San Diego State College since 1946.

**CORBETT, KATHERINE E.**---------- Associate Professor of Education

B.Pd., Michigan State College; B.S., M.A., Teachers College, Columbia University. At San Diego State College since 1921.

**CORCORAN, EUGENE F.**---------- Instructor in Mathematics

B.S., 1940, North Dakota State College. At San Diego State College since 1946.

**CORRIGAN, ROBERT FORD**---------- Assistant Professor of Speech Arts

A.B., 1939, Unversity of Michigan; M.A., 1941, University of Iowa. At San Diego State College since 1947.

**CROUCH, JAMES ENSIGN**---------- Professor of Biology

B.S., 1930, M.S., 1931, Cornell University; Ph.D., 1939, University of Southern California. At San Diego State College since 1932.

**CUNNINGHAM, CORNELIUS CARMAN**---------- Associate Professor of Speech Arts

A.B., 1915, Beloit College; M.A., 1923, Northwestern University; Ph.D., 1935, University of Iowa. At San Diego State College since 1947.

**DeLAND, EDWARD C.**---------- Acting Instructor in Physics

B.S., 1943, South Dakota School of Mines and Technology. At San Diego State College since 1946.

**DEPUTY, ERBY CHESTER**---------- Professor of Education

B.A., 1922, University of Denver; M.A., 1926, Ph.D., 1929, Columbia University. At San Diego State College since 1931.

**DEVINE, WARREN R.**---------- Acting Instructor in Physics

B.S., 1936, Massachusetts Institute of Technology. At San Diego State College since 1946.

**DICKHAUT, FLORENCE LILLIAN SMITH** (Mrs. Charles A.)
Professor of English

B.A., Northwestern University; M.A., University of Chicago. At San Diego State College since 1917.

**EAGLE, JOHN E.**---------- Assistant Professor of Mathematics

B.S., 1930, Montana State College; A.M., 1940, Ed.D., 1947, Stanford University. At San Diego State College since 1946.

**EARNEST, SUE W.** (Mrs. L. E.)---------- Assistant Professor of English

B.A., San Diego State College; M.A., Ph.D., University of Southern California. At San Diego State College since 1947.

**EMERSON, ARTHUR T.**---------- Acting Assistant Professor of Mathematics

B.S., 1916, U. S. Naval Academy; one year graduate study at Naval War College. At San Diego State College since 1947.

**ENGLANDER, HERMAN S.**---------- Acting Instructor in Mathematics

B.S., 1939, California Institute of Technology. At San Diego State College since 1947.

ESTEP, LEWIS I.------------Acting Instructor in Geology

A.B., 1940, San Diego State College. At San Diego State College since 1946.

EVANS, ROSS A.------------Instructor in Chemistry

A.B., 1937, San Diego State College; M.A., 1939, University of California at Los Angeles, and one year graduate study at University of Southern California. At San Diego State College since 1946.

GELDREICH, EDWARD W.------------Assistant Professor of Psychology

B.A., 1933, M.A., 1935, University of Cincinnati; three years graduate study at the University of Chicago. At San Diego State College since 1947.

GENTRY, ADRIAN N.------------Instructor in Biology

Sc.B., 1934, Ottawa University; M.A., 1935, University of Kansas. Three years of graduate study at University of Washington and University of California. At San Diego State College since 1946.

GIBSON, ERNEST DANA------------Associate Professor of Commerce

B.S., 1936, University of Minnesota; M.A., 1939, Colorado State College of Education; Ed.D., 1944, New York University. At San Diego State College since 1947.

GLEASON, JOHN MORTIMER------------Assistant Professor of Mathematics

B.A., 1929, University of California at Los Angeles; M.A., 1930, University of California. One and a half years graduate study since 1930 at University of Southern California, University of California at Los Angeles and Claremont Colleges. At San Diego State College since 1930.

GRAHAM, JOHN LLOYD------------Acting Instructor in Mathematics

B.S., 1934, Ashland College; M.A., 1940, Kent State University. At San Diego State College since 1947.

GRESS, IRVIN S.------------Director of Occupational Guidance and Placement;
Assistant Professor of Psychology

A.B., 1922, George Washington University; M.Ed., 1938, University of Pittsburgh. Two years graduate study at Columbia University, Pennsylvania State College and University of Pittsburgh. At San Diego State College since 1946

GULICK, SIDNEY L., JR.------------Associate Professor of English

A.B., 1923, A.M., 1925, Oberlin College; Ph.D., 1931, Yale University. At San Diego State College since 1945.

HAMMACK, EDITH CHASTAIN------------Associate Professor of Education

B.A., San Jose State College. At San Diego State College since 1911.

HAMMACK, ISABELLA STEWART------------Assistant Professor of Education

B.A., M.A., University of California. One-half year graduate study since 192 at University of California. At San Diego State College since 1936.

HARCLEROAD, FRED F., JR.------------Director of Audio-Visual Education
Assistant Professor of Education

A.B., 1939, M.A., 1942, Colorado State College of Education; Ph.D., 1947, Stanford University. At San Diego State College since 1946.

HARVEY, DOROTHY R. (Mrs. F. A.)------------Assistant Professor in Botany

B.A., San Diego State College; M.A., University of Southern California. One year graduate study since 1928 at University of Southern California and University of Chicago. At San Diego State College since 1924.

HARWOOD, ROBERT DANIEL------------Professor of Zoology

A.B., 1920, Pomona College; Ph.D., 1928, Cornell University. At San Diego State College since 1928.

HASKELL, HARRIET------------Assistant Professor of English

A.B., Mills; A.M., Bryn Mawr; Ph.D., University of Wisconsin. At San Diego State College since 1940 excepting 1943-1945.

HELLYER, C. DAVID------------Assistant Professor of Journalism

B.A., 1936, The Principia; M.S., 1938, Columbia University. At San Diego State College since 1947.

HISCOX, ETHEL M.------------Assistant Professor of Music

Graduate of Oberlin College Conservatory; B.S., Columbia University; M.A. New York University. Voice study with Lila Robeson and Herbert Witherspoon of New York Metropolitan Opera Co. At San Diego State College since 1947.

**HOUSER, LOWELL D.**——Assistant Professor of Art

Diploma, 1924, Chicago Art Institute. Five years' special study since 1924 in Mexico, Yucatan, Haiti, and New York City. At San Diego State College since 1938.

**HUNTER, JAMES J., JR.**——Director of Secondary Education; Associate Professor of Education

A.B., 1932, Cornell University; M.S., 1936, Ph.D., 1940, Syracuse University. At San Diego State College since 1946.

**JACKSON, EVERETT GEE**——Professor of Art

B.A., 1930, San Diego State College. Three years special study in Mexico. M.A., 1939, University of Southern California. At San Diego State College since 1930.

**JOHNSON, FRANK LOUIS**——Associate Professor of English

B.A., 1928, M.A., 1929, University of Minnesota; Ph.D., 1934, University of Wisconsin. At San Diego State College since 1939.

**JONES, SYBIL ELIZA**——Associate Professor of Speech Arts

B.L., M.L., University of California. Two years special study since 1907. At San Diego State College since 1925. Deceased February 23, 1948.

**JOSEPH, LIONEL**——Assistant Professor of Chemistry

B.S., 1933, St. Louis University; M.S., 1934, Ph.D., 1937, Washington University. At San Diego State College since 1947.

**KAPLAN, OSCAR J.**——Assistant Professor of Psychology

A.B., 1937, M.A., 1938, University of California at Los Angeles; Ph.D., 1940, University of California. At San Diego State College since 1946.

**KEENEY, JOSEPH SUMNER**——Professor of English

B.A., 1921, Yale College; M.A., 1928, Ph.D., 1933, University of California. At San Diego State College since 1933.

**KENNEDY, CHESTER BARRETT**——Assistant Professor of English

B.A., 1927, Chico State College; M.A., 1939, Stanford University. Three years graduate study since 1928 at Stanford University and the University of California. At San Diego State College since 1937.

**KITZINGER, ANGELA M.**——Assistant Professor of Health Education

A.B., Barnard College; M.A., Teachers College, Columbia University. Year of additional work at Central School of Hygiene and Physical Education and at Gymnastic Institute, Ollerup, Denmark. At San Diego State College since 1945.

**KUWARTH, MADGE E.**——Instructor in Education

A.B., University of Washington; A.M., Teachers College, Columbia University. At San Diego State College since 1947.

**LAURITSEN, WILLIAM H.**——Professor of Health Education

A.B., 1923, M.A., 1929, University of Nebraska; Ph.D., 1939, Ohio State University. At San Diego State College since 1947.

**LeBARRON, EVANGELINE O. (Mrs. H. E.)**——Instructor in Commerce

B.A., B.S., University of Iowa; B.A., Sioux Falls College. One year of graduate work at Claremont Colleges, University of Southern California and University of Minnesota. At San Diego State College since 1946.

**LEIB, JULIUS**——Associate Professor of Music

Three years special study at Leipzig Conservatory. At San Diego State College since 1938.

**EONARD, CHARLES B.**——Professor of History

B.A., 1921, M.A., 1922, Ph.D., 1929, University of California. At San Diego State College since 1921.

**ESLEY, LEWIS B.**——Professor of History

B.A., 1920, Stanford University; M.A., 1923, Ph.D., 1933, University of California. At San Diego State College since 1924.

**INLEY, JAMES**——Assistant Professor of Education

Ph.B., 1927, University of Chicago; M.S., 1934, Ph.D., 1938, University of Southern California. At San Diego State College since 1945.

**LIVINGSTON, GEORGE ROBERT**--------------------Professor of Mathematic

B.S., 1910, M.A., 1922, University of California. One year graduate study sinc 1922 at University of California, University of California at Los Angeles, an University of Southern California. At San Diego State College since 1921.

**LUCIO, WILLIAM HOWARD**----------------Director of Elementary Education
Associate Professor of Educatio

A.B., 1934, M.A., 1937, Ph.D., 1944, University of California. At San Dieg State College since 1939.

**MACQUARRIE, WILLIAM D.**-------------Assistant Professor of Industrial Art

B.A., 1935, San Jose State College; M.A., 1938, Stanford University. One and one-half years of graduate study at the University of Southern California. At San Diego State College since 1947.

**MADDEN, RICHARD**-----Dean of Professional Education; Professor of Educatio

B.A., 1926, Nebraska (Peru) State Teachers College; M.A., 1930, Ph.D., 1931 Columbia University. At San Diego State College since 1939.

**MARCHAND, ERNEST L.**------------------------Associate Professor of English

B.A., and M.A., 1926, University of Washington; Ph.D., 1938, University of Wisconsin. At San Diego State College since 1946.

**MATSON, STEWART W.**--------------------------Acting Instructor in Physics

B.S., 1934, University of Chicago. One year of graduate study. At San Dieg State College since 1946.

**McCLINTIC, JOSEPH O.**----------------------Associate Professor of Economics

A.B., 1924, Central College; A.M., 1927, University of Missouri; Ph.D., 1940 University of Wisconsin. At San Diego State College since 1946.

**McCOLLOM, IVAN N.**-----------------------------Director of Summer Sessions;
Associate Professor of Psychology

B.A., 1930, Central Washington College of Education; B.S., 1931, M.S., 1932, University of Oregon; Ed.D., 1940, Colorado State College of Education. At San Diego State College since 1946.

**McGAUGHEY, JANET M. (Mrs. J. R.)**-------------Assistant Professor of Musi

B.M., M.M., University of Michigan. At San Diego State College since 1947.

**MENDENHALL, MARY**------Dean of Women; Professor of Educational Guidance

B.A., University of Colorado; M.A., University of Southern California; Ph.D., Yale University. At San Diego State College since 1939.

**MERRILL, JOHN E.**-------------------------------Assistant Professor of History

A.B., 1933, Stanford University; A.M., 1934, Harvard University. Two years graduate study at Stanford University. At San Diego State College since 1946.

**MERZBACHER, CLAUDE FELL**----------------Acting Instructor of Chemistry

B.S., 1939, University of Pennsylvania. At San Diego State College since 1947.

**MESSIER, LEONARD N.**----------------------------------Instructor in French

A.B., 1935, San Diego State College; M.A., 1936, Ph.D., 1946, University of California. At San Diego State College since 1946.

**MILLER, DOROTHY A.**--------------------------Acting Instructor in Chemistry

B.S., A.B., Southeast Missouri State Teachers College; M.S., State University of Iowa. At San Diego State College since 1947.

**MILNE, DAVID S.**------------------------------Assistant Professor of Sociology

A.B., 1932, University of California at Los Angeles; M.A., 1939, University of Southern California. Two years graduate study at University of Chicago. Formerly Field Representative of California Youth Authority. At San Diego State College since 1946.

**MOE, CHESNEY R.**--------------------------------------Professor of Physics

B.A., 1929, M.A., 1931, Stanford University; Ph.D., 1941, University of Southern California. At San Diego State College since 1931.

**MOORE, EDWENA B. (Mrs. E. J.)**---------------Acting Instructor in Education

B.A., San Diego State College. At San Diego State College since 1947.

**MORITZ, CHARLES E.**---------------------------Assistant Professor of Biology

A.B., 1932, Dartmouth College; Ph.D., 1936, University of California. At San Diego State College since 1946.

**IYERS, MABEL A.**------------------------------Assistant Professor of Biology

B.A., M.A., Pomona College; Ph.D., Cornell University. Post doctoral study at University of Southern California, University of California at Los Angeles, University of Wisconsin and Claremont Colleges. At San Diego State College since 1946.

**ASATIR, ABRAHAM PHINEAS**--------------------------Professor of History

B.A., 1921, M.A., 1922, Ph.D., 1926, University of California. At San Diego State College since 1928.

**ICHOLS, AMBROSE R., JR.**------------------Associate Professor of Chemistry

B.S., 1935, University of California; Ph.D., 1939, University of Wisconsin. At San Diego State College since 1939.

**ORLAND, CALVERT E.**---------------------------------Instructor in Biology

B.A., 1931, M.S., 1933, Pomona College. One-half year graduate study at University of California and Claremont Colleges. At San Diego State College since 1947.

**LSON, ANDREW C., JR.**---------------------------------Instructor in Biology

B.A., 1939, San Diego State College; M.S., 1942, University of Idaho. One year graduate study at University of California. At San Diego State College since 1946.

**PPENHEIMER, MAX, JR.**---------------------Instructor in Foreign Languages

Bès L, 1935, University of Paris; B.A., 1941, New York University; M.A., 1942, University of California at Los Angeles; Ph.D., 1947, University of Southern California. At San Diego State College since 1947.

**SBORN, CLARENCE G.**--------------Professor of History and Political Science

B.A., 1926, M.A., 1927, Ph.D., 1935, Stanford University. At San Diego State College 1928-1929; and since 1937.

**ANOSH, ANNA M.**--------------------------------Acting Instructor in Spanish

A.B., University of Denver. One year graduate study at University of Mexico, Centro de Estudios Historicos and University of California. At San Diego State College since 1946.

**ATTERSON, LENA E.**---------------------------------------Professor of Art

A.B., B.S., Ohio University; M.A., Columbia University. One year graduate study since 1918 in Berlin, Vienna, Paris, London. At San Diego State College since 1933.

**EASE, GLENN R.**----------------------------Assistant Professor of Psychology

A.B., 1915, Albion College; M.A., 1927, Ph.D., 1928, State University of Iowa. At San Diego State College since 1947.

**EIFFER, HERBERT C., JR.**----------Dean of Student Personnel and Guidance;
Associate Professor of Psychology and Guidance

A.B., 1928, University of California at Los Angeles; M.A., 1930, Ph.D., 1939, Stanford University. At San Diego State College since 1937.

**ERRY, FAY V. (Mrs. J. M.)**-------Director of Guidance for Provisional Students;
Associate Professor of Sociology

B.A., San Diego State College; M.A., Ed.D., University of Southern California. At San Diego State College since 1936.

**ETERSON, CHARLES E.**---------Dean of Men; Professor of Physical Education

A.B., 1928, San Diego State College; M.A., 1937, Claremont Colleges. At San Diego State College since 1921.

**FAFF, PAUL LEWIS**-----------------------Associate Professor of Speech Arts

B.A., 1929, Stanford University; M.A., 1937, University of Southern California. Two years study since 1937 at University of Southern California. At San Diego State College since 1931.

**HILLIPS, GEORGE L.**--------------------------Assistant Professor of English

B.A., 1931, Dartmouth College; M.A., 1932, Harvard University; Ph.D., 1937, Boston University. At San Diego State College since 1947.

**HILLIPS, WALTER THOMAS**-------------------------Professor of Spanish

A.B., 1925, University of Washington; M.A., 1926, Stanford University; Ph.D., 1943, University of Southern California. Graduate study at National University of Mexico, Institute of French Education, Middlebury College Italian School. At San Diego State College since 1927.

POST, LAUREN CHESTER.............................Professor of Geograp

A.B., 1924, M.A., 1931, Ph.D., 1937, University of California. At San Die State College since 1937.

POVENMIRE, E. KINGSLEY..................Assistant Professor of Speech A

B.S., 1929, Ohio State University; M.F.A., 1933, Yale University. At San Die State College since 1946.

PRUGH, EARL E.......................Acting Assistant Professor of Mathemati

B.S., 1899, Ohio Wesleyan University; M.A., 1923, Columbia University. San Diego State College since 1946.

RAGEN, KATHERINE M...........................Assistant Professor of Histo

B.A., Penn College; M.A., Bryn Mawr College; Ph.D., University of Wiscons At San Diego State College since 1947.

RIDOUT, LIONEL U.........................................Instructor in Histo

A.B., 1937, San Diego State College; M.A., 1940, and one and one-half yea graduate study at University of California. At San Diego State College sin 1946.

ROBINSON, DUDLEY HUGH.............................Professor of Chemist

B.A., 1927, Louisiana State University; M.S., 1932, University of Iowa; Ph. 1942, University of Southern California. At San Diego State College since 19

ROBINSON, EVELYN L...........................Instructor in Physical Educati

B.S., Mary Washington College of the University of Virginia; M.S., Universi of Southern California. At San Diego State College since 1946.

ROGERS, SPENCER LEE...............................Professor of Anthropolo

B.A., 1927, San Diego State College; M.A., 1930, Claremont Colleges; Ph. 1937, University of Southern California. At San Diego State College since 19

ROHFLEISCH, KRAMER J...........................Associate Professor of Histo

A.B., 1933, M.A., 1935, Ph.D., 1946, University of California. At San Die State College since 1947.

ROSS, MELVYN K...................................Assistant Professor of Chemist

A.B., 1939, San Diego State College; M.S., 1942, and two years graduate stu at University of Southern California. At San Diego State College since 19

ROWE, ROBERT D.................................Associate Professor of Chemist

A.B., 1931, Engineer in Engineering Chemistry, 1932, Ph.D., 1939, Stanfo University. At San Diego State College since 1946.

RUJA, HARRY..................Assistant Professor of Philosophy and Psycholo

A.B., 1933. University of California at Los Angeles; M.A., 1934, Universi of Chicago; Ph.D., 1936, Princeton University; one year post doctoral stu at University of California at Los Angeles. At San Diego State College sin 1947.

RUOCCO, ILSE H. (Mrs. L.)..............................Associate Professor of A

B.E., University of California at Los Angeles; M.A., Columbia University. San Diego State College since 1934.

RYAN, FREDERICK L............................Associate Professor of Econom

B.S., 1916, Tufts College; Ph.D., 1930, University of California. At San Die State College since 1946.

SCHEY, OLE..............................Acting Assistant Professor of Mathemat

B.S., 1924, M.A., 1932, and one year of graduate study at the University Minnesota. At San Diego State College since 1947.

SCHMOCK, JOYCE C. (Mrs. D.)..........................Instructor in Educati

A.B., San Diego State College. At San Diego State College since 1947.

SCHUTTE, WILLIAM H.................Assistant Professor of Physical Educati

B.S., 1933, University of Idaho, M.S., 1947, University of Southern Californ At San Diego State College since 1947.

SCHWARTZ, EVA H. (Mrs. H.)....................Acting Instructor in Chemist

B.S., M.S., and one and one-half years graduate study at University of Ca fornia. At San Diego State College since 1946.

SCHWOB, MARION LYON (Mrs. W. E.) - Associate Professor of Physical Education

B.A., University of Iowa; M.S., University of Southern California. At San Diego State College since 1934.

SCOTT, FRANK L. - Assistant Professor of Physical Education

A.B., 1931, Grinnell College; M.A., 1940, University of Michigan. At San Diego State College since 1947.

SELLMAN, HUNTON D. - Professor of Speech Arts

B.S., 1922, Purdue University; M.S., 1925, University of Arizona. Three and one-half years graduate study at University of California, University of North Carolina and Yale University. At San Diego State College since 1946.

SELLWOOD, JOHN J. - Assistant Professor of Physical Education

A.B., 1941, San Diego State College; M.S., 1946, and one year graduate study at University of Southern California. At San Diego State College since 1946.

SHANNON, FLORENCE S. (Mrs. E. L.) - Assistant Professor of Physical Education

B.A., University of California; M.S., University of Southern California. At San Diego State College since 1933.

SHOUSE, CLAUDE F. - Instructor in English

A.B., 1928, Georgetown College; M.A., 1941, University of Kentucky; one year graduate study at University of Pittsburgh and University of Southern California. At San Diego State College since 1946.

SJOSTRAND, THOR H. - Acting Instructor in Engineering

B.S., 1945, University of Texas. At San Diego State College since 1947.

SMITH, CHARLES ROBERTS - Assistant Professor of Physical Education

B.A., 1931, San Diego State College; one year graduate study at University of Southern California. At San Diego State College since 1933.

SMITH, CLIFFORD EDWARD - Professor of Astronomy

B.A., 1923, Carleton College; M.A., 1926, Swarthmore College; Ph.D., 1936, University of California. At San Diego State College since 1937.

SMITH, DEANE FRANKLIN - Assistant Professor of Music

B.Mus., 1931, M.Mus., 1939, Northwestern University. At San Diego State College since 1939.

SMITH, LOUIS E., JR. - Assistant Professor of Physics

A.B., 1938, San Diego State College; Ph.D., 1945, University of Washington. At San Diego State College since 1946.

SORENSON, GEORGE N. - Assistant Professor of Art

A.B., 1937, San Diego State College; M.A., 1946, University of Southern California. At San Diego State College since 1946.

PANGLER, JOHN A. - Assistant Professor of Chemistry

A.B., 1939, Ph.D., 1942, West Virginia University. At San Diego State College since 1946.

PORTSMAN, CHARLES C. - Assistant Professor of Physical Education

B.S., 1927, North Texas State Teachers College. One and one-half years graduate study at University of Southern California. At San Diego State College since 1947.

PRINGSTON, CHRISTINE - Associate Professor of Music

B.A., B.M., University of Redlands; M.A., University of Washington. Diplomée d'execution, Conservatoire Americain, Fontainebleau, France. At San Diego State College since 1930.

TEINMETZ, HARRY CHARLES - Associate Professor of Psychology

B.A., 1924, M.A., 1927, University of California; Ph.D., 1947, Purdue University. At San Diego State College since 1930.

TONE, HAMILTON L. - Acting Assistant Professor of Engineering

B.S., 1925, U. S. Naval Academy. Two and one-half years graduate study. At San Diego State College since 1947.

TONE, JOHN PAUL - Head Librarian; Professor of Library Science

B.S., 1926, Northwest Missouri State Teachers College; B.S., 1929, M.S., 1930, University of Illinois; Ph.D., 1945, University of Chicago. At San Diego State College since 1930.

STORM, ALVENA (Mrs. Eugene) ______________ Associate Professor of Geograp

A.B., A.M., University of California. Extensive travel and study in Europ Panama and United States. At San Diego State College since 1926.

SWANN, EDWIN G., JR. ______________ Acting Instructor in Physi

A.B., 1943, San Diego State College. At San Diego State College since 194

SWIGGETT, JEAN D. ______________ Assistant Professor of A

A.B., 1934, San Diego State College; M.F.A., 1939, University of Southe California. At San Diego State College since 1946.

TALBOY, RUTH A. ______________ Assistant Professor of Home Ar

B.S., Iowa State College; M.A., Stanford University. At San Diego Sta College since 1947.

TAYLOR, MERREL A. ______________ Instructor in Biolo

A.B., 1936, Indiana University; B.S.F., 1938, M.A., 1940, University of Mic igan. At San Diego State College since 1946.

TERHUNE, JOHN A. ______________ Acting Instructor in Physi

B.S., 1916, U. S. Naval Academy; M.S., 1929, Engineering School, Harva University. At San Diego State College since 1947.

TERRY, WILLIAM L. ______________ Professor of Physical Educati

A.B., 1930, Western Kentucky State Teachers College; M.S., 1932, India University; two years additional study at University of Kentucky and U versity of Illinois. At San Diego State College since 1946.

THEOBALD, JOHN R. ______________ Associate Professor of Engli

B.A., 1925, St. Catherine's College, Oxford University; M.A., 1928, Mansfie College, Oxford University; Ph.D., 1942, University of Iowa. At San Die State College since 1946.

TIDWELL, JAMES N. ______________ Associate Professor of Engli

B.A., 1929, Simmons University; M.A., 1933, University of Oklahoma; Ph. 1947, Ohio State University. At San Diego State College since 1947.

TOLLEFSEN, DOROTHY J. ______________ Instructor in Physical Educati

A.B., and one and one-half years graduate study at University of Californi At San Diego State College since 1946.

TORBERT, FRANCES B. (Mrs. H.) ______________ Assistant Professor of Commer

A.B., Stanford University; M.A., University of Southern California. One ye graduate work at Stanford University. At San Diego State College since 19 excepting 1943-1946.

TRAIL, MABEL COY ______________ Associate Professor of Engli

B.A., Parsons College; M.A., State University of Iowa; Ph.D., University Southern California. At San Diego State College since 1935.

TUCKER, GORDON H. ______________ Associate Professor of Biolo

B.S., 1931, M.S., 1934, University of South Carolina; Ph.D., 1934, Universi of North Carolina. At San Diego State College since 1945.

TURNER, MERLE B. ______________ Acting Assistant Professor of Psycholo

B.A., 1941, Willamette University; M.A., 1947, Stanford University. At S Diego State College since 1947.

VASCHÉ, JOSEPH BURTON ______________ Assistant Professor of Educati

A.B., 1931, San Jose State College; M.A., 1935, Ed.D., 1947, Stanford Unive sity. At San Diego State College since 1947.

WALKER, HILDE KRAMER (Mrs.) ______________ Assistant Professor of Germ

B.A., M.A., Northwestern University. At San Diego State College since 19

WALLER, JOHN O. ______________ Acting Instructor in Engli

B.A., 1941, San Diego State College. One year graduate study at Universi of California at Los Angeles. At San Diego State College since 1946.

WALLING, CURTIS R. ________ Assistant Professor of Mathematics and Engineeri

B.A., 1925, E.E., 1926, Stanford University. One and a half years gradua study since 1926 at Stanford University and University of Southern Californ At San Diego State College since 1931.

WARREN, TULLY E.------Instructor in Political Science

B.A., 1938, M.A., 1939, and two years of graduate study at Stanford University. At San Diego State College since 1947.

WATENPAUGH, FRANK M.------Assistant Professor of Commerce

A.B., 1916, Pomona College; M.A., 1931, University of Southern California. Two years graduate study since 1931 at University of Southern California and University of Oregon. At San Diego State College since 1935.

WATSON, DONALD R.------Dean of General Education
Associate Professor of Physical Science

B.A., 1924, B.S., 1925, M.A., 1927, Ed.D., 1940, University of Southern California. At San Diego State College since 1939.

WHITE, ALFRED E.------Registrar; Director of Educational Research; Associate Professor of Guidance

A.B., 1922, M.A., 1923, University of California; Ed.D., 1941, Stanford University. At San Diego State College since 1946.

WILLIAMS, SAMUEL H.------Acting Assistant Professor of Engineering

B.S., 1929, Massachusetts Institute of Technology. At San Diego State College since 1947.

WOLF, ERNEST M.------Instructor in Foreign Languages

Study at the Universities of Berlin, Paris, Muenster, Cambridge and Bonn. Ph.D., 1934, University of Bonn. Post doctoral study at Universities of Cambridge, California at Los Angeles, and Southern California. At San Diego State College since 1947.

WRIGHT, WILLIAM H.------Professor of Commerce

B.S., 1917, M.A., 1928, University of California, Ph.D., 1943, University of Southern California. At San Diego State College since 1921.

## ASSISTANT INSTRUCTORS

BENNETT, RICHARD------Assistant in Geography

A.B., 1948, San Diego State College.

BYRNE, CHARLES T.------Assistant in English; Director of Public Relations

A.B., 1948, San Diego State College.

CLARK, JAMES C.------Assistant in Biology

A.B., 1948, San Diego State College

COUVRETTE, JOHN F.------Assistant in Commerce

A.B., 1948, San Diego State College.

CRAWFORD, RONALD W.------Assistant in Biology

A.B., 1948, San Diego State College.

DALBY, JOHN P.------Assistant in Music

A.B., 1948, San Diego State College.

EMERSON, LAWRENCE L., JR.------Assistant in Physical Science

B.S., 1948, New Mexico College of Agriculture and Mechanic Arts.

GRASTY, GEORGE M.------Assistant in Biology

B.A., 1927, University of Texas.

LEWIS, URBAN J.------Assistant in Chemistry

A.B., 1948, San Diego State College.

RUSK, JAMES H., JR.------Assistant in Physics

A.B., 1948, San Diego State College.

ILVERNAIL, CHESTER J.------Assistant in Astronomy

A.B., 1948, San Diego State College.

TRADEWELL, SHIRLEY M.------Assistant in Biology

A.B., 1948, San Diego State College.

## LECTURERS

ANDREWS, JULIA G. (Mrs. F. S.) ------------------------------ Lecturer in A

A.B., Northwestern University; M.A., Columbia University; two years gra uate study at Teachers College, Columbia. At San Diego State College sin 1947.

BARNES, MELVIN W. ------------------------------ Lecturer in Psycholo

A.B., 1932, Greenville College; M.S., 1934, Ph.D., 1941, University of Illino At San Diego State College since 1947.

BLAKE, DEAN ------------------------------ Lecturer in Meteorolo

Meteorologist, U. S. Weather Bureau. At San Diego State College since 192

CONSIDINE, CHARLES R. ------------------------------ Lecturer in Commer

Industrial Engineer, Public Accountant; B.S., 1940, and two and one-ha years of graduate study, University of California. At San Diego State Colle since 1946.

DIRKS, JOHN H. ------------------------------ Lecturer in A

B.A., 1937, San Diego State College. At San Diego State College since 194

FARMER, MALCOLM F. ------------------------------ Lecturer in Anthropolo

B.A., 1940, University of Arizona. Director San Diego Museum of Man. At Sa Diego State College since 1947.

GELCHER, JOSEPH ------------------------------ Lecturer in Commer

Insurance Underwriter. At San Diego State College since 1946.

GOODWIN, JOHN H. ------------------------------ Lecturer in Commer

A.B., 1920, Miami University; one and one-half years graduate study at Sa Diego State College and the University of California. At San Diego Sta College since 1947.

HUFF, GEORGE D., M.D. ------------------------------ Lecturer in Health and Hygie

Practicing Physician. At San Diego State College since 1939.

HUTTON, WILLIAM E. ------------------------------ Lecturer in Chemist

A.B., 1938, University of California; one and one-half years graduate stu at University of California and University of California at Los Angeles. San Diego State College since 1947.

JAMES, CARL E. ------------------------------ Lecturer in Chemist

A.B., 1933, San Diego State College; one year graduate study at Universi of California. At San Diego State College since 1948.

JOHNSON, ALAN W. ------------------------------ Lecturer in Psycholo

A.B., 1937, University of California at Los Angeles; M.Ed., 1941, Universi of Cincinnati; one year graduate study at Columbia University. At San Die State College since 1947.

LAMDEN, CHARLES W. ------------------------------ Lecturer in Commer

Public Accountant. A.B., 1937, M.A., 1939, and two and one-half years gradua study at University of California at Los Angeles. At San Diego State Colle since 1946.

LEE, PETER A. ------------------------------ Lecturer in Philosop

B.A., 1935, Union College, Manila, P. I.; B.D., 1936, Union Theological Sem nary, Manila, P. I.; M.A., 1939, Ph.D., 1940, Yale University. At San Die State College since 1947.

LINDSLEY, BYRON F. ------------------------------ Lecturer in Commer

A.B., 1937, San Diego State College; LL.B., 1944, Georgetown Law Schoo one year graduate study at American University Graduate School. At Sa Diego State College since 1947.

McLEES, BERTRAM, JR. ------------------------------ Lecturer in Commer

Deputy District Attorney. A.B., 1931, San Diego State College; LL.B., 193 Stanford University. At San Diego State College since 1946.

REED, GEORGE O. ------------------------------ Lecturer in Speech Ar

A.B., 1944, San Diego State College. At San Diego State College since 194

TAYLOR, BYRON M. ------------------------------ Lecturer in Physical Scien

Instructor in City Schools. A.B., 1927, Stanford University; M.A., 193 Claremont Colleges. At San Diego State College since 1946.

WILEY, JOAN G. (Mrs. J. N.) ------------------------------ Lecturer in Psychology and Sociolo

B.A., M.S.S., University of Buffalo. At San Diego State College since 194

## MEDICAL STAFF

O. S. Harbaugh, M.D. ------------------------------ Medical Examin

Louise C. Lovekin, M.D. ------------------------------ Medical Examin

Marilynn M. Fenwick, P.H.N. ------------------------------ Nur

## ADMINISTRATIVE OFFICE STAFF

| | |
|---|---|
| nne T. Brown | Admissions Secretary |
| vadne T. Deardorf | Assistant Registrar |
| ertrude K. Dickinson | Senior Account Clerk |
| hirley I. Embery | Registrar's Office |
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# SAN DIEGO STATE COLLEGE

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FOR THE YEAR 1949-1950

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# BULLETIN

## and Announcement of Courses

VOLUME 36

JUNE, 1949

## SAN DIEGO STATE COLLEGE

SAN DIEGO, CALIFORNIA

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### JANUARY

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### JULY

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### AUGUST

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### SEPTEMBER

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### OCTOBER

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### NOVEMBER

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# CALENDAR 1949-1950

## SUMMER SESSION, 1949

Term I —June 20-July 29
Term IIA—August 1-19
Term II —August 1-September 2

## FALL SEMESTER, 1949-1950

| | |
|---|---|
| August 1 | Applications for admission must be filed on or before this date. |
| August 10 or 27 | Qualifying examinations for all entering students. (August 10, 12.30-4.30 p.m.) (August 27, 8.30 a.m.-12.30 p.m.) |
| September 10 | First day of orientation program. All entering freshmen are required to be on the campus from 8.30 a.m. until 3 p.m. All other new students are strongly urged to attend. |
| September 10 | Fundamentals test (8.30 a.m. to 12 m.).<br>General culture test (1 p.m. to 4.30 p.m.). |
| September 12 | Second day of orientation program. All entering freshmen are required to be on the campus from 8.30 a.m. until 3 p.m. All other new students are strongly urged to attend. |
| September 13-14 | Registration and payment of fees. |
| September 15 | Instruction begins. Late registration fee becomes effective. |
| September 26 | Last date for late registration. |
| September 29 | Applications for admission to teacher education, Little Theatre, 12 m. |
| November 4 | Last date for withdrawal from classes. |
| November 11 | Armistice Day—holiday. |
| November 24-26 | Thanksgiving recess. |
| December 9 | Last date for filing applications for mid-year graduation. |
| December 17 | Last day before Christmas recess begins. |
| January 3 | Classwork resumes. |
| January 18-25 | Semester examinations. |
| January 25 | End of first semester. |

## SPRING SEMESTER, 1949-1950

| | |
|---|---|
| January 3 | Applications for admission must be filed on or before this date. |
| January 14 | Qualifying examinations for all entering students (8.30 a.m. to 12.30 p.m.). |
| January 31 | Orientation program. All entering freshmen are required to be on the campus from 8.30 a.m. until 3 p.m. All other new students are strongly urged to attend. |
| January 31 | Fundamentals test (8.30 a.m.-12 m.).<br>General culture test (1 p.m. to 4.30 p.m.). |
| February 1-2 | Registration and payment of fees. |
| February 3 | Instruction begins. Late registration fee becomes effective. |
| February 13 | Last date for late registration. |
| February 23 | Applications for admission to teacher education, Little Theatre, 12 m. |
| March 31 | Last date for withdrawal from classes. |
| April 3-8 | Spring recess. |
| May 30 | Memorial Day—holiday. |
| June 1-8 | Semester examinations. |
| June 8 | End of second semester. |
| June 9 | Commencement. |

## SUMMER SESSION, 1950

Term I —June 19-July 28
Term II—July 31-August 18

# FUNCTIONS OF THE STATE COLLEGES

The state colleges have three major functions, namely: (1) To help the individual student to develop a well-rounded and adjusted personality; (2) to promote civic intelligence and competence; and (3) to create supplies of trained men and women, some to serve as teachers in the elementary and secondary schools, some to fill intermediate places of leadership, and some to transfer to graduate institutions to equip themselves to extend the frontiers of knowledge and to occupy the higher positions of leadership. In terms of publicly supported higher education, the state colleges and the university together make provision for the realization of all the essential objectives of higher education in our State.

To achieve their unique purposes the state colleges have developed and are improving offerings as follows:

1. Teacher education curricula for those students who plan to teach in the elementary school, the junior high school, and in secondary schools.
2. Preprofessional curricula.
3. Curricula of varying lengths in such fields as business, industry, governmental services, homemaking, and social service.
4. General education for students who take work which leads toward the bachelor of arts degree or to the higher professions through graduate work.
5. Guidance services to assist the individual student to plan his educational program and to make his college and life adjustments.
6. Extension courses in appropriate fields.

The state colleges accept the principle that higher education should be available to all capable high school graduates. The preservation and improvement of democracy depends upon the full and unhampered development of all potential citizenship and leadership resources. In keeping with this principle the state colleges maintain flexible entrance requirements. Each applicant is treated individually in terms of his potential capacity and his potential contribution and not in terms of past academic pattern or accomplishment alone.

The state colleges purposely maintain not only flexible entrance requirements, but also, adjustive curricula, and adequate and effective guidance and counseling services to promote the personal and educational development of worthy students. The state colleges modify traditional academic restrictions and provide new curricula and services whenever such modifications and additions seem to serve the legitimate desirable needs of individuals and society.

The promotion of civic intelligence and competence is the underlying aim of all activities on state college campuses. Special emphasis centers on warm personal relationships between instructors and students, on friendly counsel in time of need, and on the day-to-day routine of living in a friendly atmosphere. Because the majority of state college students live at home, it is possible to link together the college, the home, and the community in realistic democratic relationships.

The democratic controls exercised over the state colleges make them readily and effectively responsive to individual and community needs and encourage them continuously to make significant improvements in both curriculum and personal services. The state colleges are thus laboratories in which the facts and theories developed in research, in community living, and in daily association with students are reflected in the instructional program.

The state colleges plan their program of higher education so as to provide educational services inherent in the principle of equality of opportunity.

# THE COLLEGE

## LOCATION AND ENVIRONMENT

Renowned as a winter resort with a mild but invigorating climate, San Diego has become equally famous for its cool summers. High cultural standards in art, music, literature, and science create a stimulating environment for a college. Many of these advantages are to be found in the heritage resulting from the expositions of 1915-16 and 1935-36, including the buildings themselves, which portray the best types of Spanish colonial art and architecture. Housed in these buildings are the Fine Arts Gallery, exhibits in anthropology, natural history, and American archaeology, which are in many respects unsurpassed. The outdoor organ, the Ford Bowl, and the horticultural gardens make Balboa Park, in which all these facilities are located, world renowned. The Scripps Institution of Oceanography, operated by the University of California at La Jolla, gives opportunity for important cooperation in the biological sciences.

## BUILDINGS AND EQUIPMENT

On February 1, 1931, the college was moved to the new campus, located one mile north of the city's principal east-west boulevard, El Cajon Boulevard. The buildings are of Spanish-Moorish architecture which is well suited to the landscape and climate of this region. They include the Academic Building (which houses lecture halls, classrooms and administrative offices) ; the Science Building ; the Library ; the Little Theater ; the Music Building ; the Campus Elementary School ; Scripps Cottage (a social clubhouse for women students) ; the Cafe and Book Store ; and the Physical Education Building (a structure with adequate facilities for both men and women). The gymnasium contains a very fine basketball floor with stands that will accommodate 1,500 spectators. A fine concrete stadium, constructed in a natural site, has a seating capacity that is adequate for present needs. The open air theater, seating 4,200 persons, serves as a meeting place for large groups.

## FACILITIES FOR THE EDUCATION OF TEACHERS

The college maintains a modern elementary school on the campus where it has developed an extensive program for the education of elementary school teachers. The classroom-laboratory plan which calls for the use of work-rooms, the library, and shops affords unusual opportunities for the induction of students into teaching. By arrangement with the San Diego city and county schools, directed teaching is provided in the elementary and secondary schools.

## THE FACULTY

The professional education of the faculty places the college at the 97 percentile position among teacher education institutions of the Country. For listing and further details see the directory.

## THE LIBRARY

The library facilities of this college are noteworthy for an institution of its size. The library consists of well over 110,000 books and receives more than 700 different periodicals selected to meet the requirements of a modern educational institution. Professionally trained librarians are available to render assistance to students and faculty in their reading and reference work.

The Campus Elementary School Library, representing a collection of 14,000 volumes, possesses equipment and building facilities that are unique.

## ACCREDITATION

San Diego State College is a member of the Northwest Association of Secondary and Higher Schools, the American Association of Colleges for Teacher Education, and the Western College Association.

## LIVING ACCOMMODATIONS

Living arrangements for students whose homes are not in San Diego or within commuting distance are made through the offices of the Dean of Women or the Dean of Men. Women students are urged to live in the residence hall adjoining the campus. Careful consideration is given to study conditions, healthful living, and adequate social opportunities. Room and board may be secured for approximately $275 per semester, payable in four installments. Opportunities to reduce this figure by working a few hours each week are occasionally available. Reservations should be made in advance through the Manager of Quetzal Hall, 5192 College Avenue, San Diego 5, California. Single women students under the age of 21 who find other accommodations more desirable must file with the Dean of Women a statement from the parent or guardian.

## VETERANS' EDUCATION AND HOUSING

The college has been approved by various accrediting agencies to offer courses for veterans leading toward the A.B. Degree in some 19 major fields and to the general Secondary Credential upon the completion of a graduate year. A veterans' office is maintained on the campus to facilitate registration, aid in the establishment of benefits, afford special counseling services, and serve as an information center. A joint student-faculty committee on veterans' affairs serves as a clearing house for suggestions relating to policies and procedures affecting veterans.

Through the City of San Diego, 400 family units formerly under the jurisdiction of the Federal Public Housing Authority have been made available to the college for the housing of its married veterans. These units are located some eight miles from the campus proper at Aztec Terrace, midway between Old Town and Loma Portal. Applications for housing at Aztec Terrace are made through the office of the Dean of Men.

## STUDENT LIFE

A rich field of extracurricular activities is available to the student throughout his college life. The student is urged to select these activities carefully in order that he may profit by such extra-class experiences without lowering his standards of scholarship. The *Student Handbook*, available at the time of registration, gives information concerning activities which include organizations in every department of the college, and opportunities for individual and group experience in the social, athletic, fraternal, religious and governmental life of the campus.

## STUDENT HEALTH SERVICE

The Health Department is maintained for the protection and care of student health. A complete physical examination is required of each student upon admission to college. Careful attention is given to cases undergoing remedial treatment or to cases in which a modification of study load or amount of participation in physical activities seem advisable.

A college physician and school nurse are available for consultation and emergency treatment. Students who have been absent over three days because of illness should receive clearance from the Health Office before returning to classes.

A group plan for accident insurance is in operation for students who desire to participate.

## PERSONNEL SERVICES CENTER

The college offers the services of a trained staff to students who wish help in the solution of problems which are personal, social, academic, or occupational in nature. It is a program designed to help students gain the greatest possible advantage of their college experience. Agencies and facilities cooperating in the effort to assist students include the student health service, reading and study laboratory, the speech improvement program, mathematics clinic, the placement and occupational guidance service, and a staff of personal counselors. Students who wish to take advantage of these facilities may do so through the Personnel Services Center.

## VOCATIONAL REHABILITATION SERVICE

The Bureau of Vocational Rehabilitation, California State Department of Education, offers its service to students who have an employment handicap resulting from physical disability of any kind. Included are vocational counseling, the payment of tuition and fee, and the providing of textbooks without charge to the trainee. Details of the service may be obtained from the Registrar's Office.

## SCHOLARSHIPS

A number of scholarships for both men and women has been made available through the efforts of the alumni, civic organizations, student organizations, business and professional groups and individuals, and other friends of the college. Superiority in ability and achievement, strength of character, and worthiness from the point of view of need are the standards upon which selection is based. Scholarship aid is limited for the most part to students who have completed at least one semester at the San Diego State College. Except for athletics grants-in-aid, which are initiated through the Director of Athletics, scholarship applications are made through the office of the Dean of Women.

Unless otherwise stipulated, all scholarship awards are determined and announced by the faculty Committee on Loans and Scholarships in October of the college year. Applications for scholarships for the fall semester must be filed with the office of the Dean of Women prior to October 15th. The scholarships available for 1949-50:

**ALTRUSA CLUB.** Two scholarships of $50 each are made available annually by the Altrusa Club of San Diego. Applications are considered from women students enrolled in San Diego State College who are worthy and in need.

**AMERICAN ASSOCIATION OF UNIVERSITY WOMEN.** One scholarship of $100 is given each year in June to a graduating senior who will begin work in an accredited college or university toward a higher degree or credential. The scholarship is made available by the San Diego Branch of the American Association of University Women. Interviews with representatives of that organization are required.

**AMERICAN SOCIETY OF CIVIL ENGINEERS, SAN DIEGO SECTION.** A scholarship of $75 is awarded annually through the San Diego Section of the American Society of Civil Engineers to the engineering student selected for the scholarship on a basis of character, ability, personal qualities, and financial need. Nominations are made by the Engineering Department of the College. At least sophomore status is required for nomination.

**AMERICAN SOCIETY OF CIVIL ENGINEERS.** The American Society of Civil Engineers grants a scholarship of $75 to an engineering student of sophomore standing who shows promise in the field of civil engineering.

**ANONYMOUS (B).** A scholarship of $100 is given each year to be divided among students in financial need, at the discretion of the faculty Loans and Scholarships Committee. The committee gives consideration to scholastic attainment, financial need, and character.

**ANONYMOUS (E).** A $50 scholarship, awarded each semester through the Loans and Scholarships Committee, is made available by a public spirited citizen who prefers to assist a student majoring in science.

**ART GUILD.** The Art Guild of San Diego State College awards a $25 scholarship each year to a student outstanding in the field of art.

**ASSOCIATION OF CHILD EDUCATION.** The Association of Child Education makes available each year a $50 scholarship to a student in the Kindergarten-Primary program. The award is customarily made to an upper division student showing promise in a particular field who is in need financially.

**BLUE KEY.** Two scholarships of $50 each are awarded annually by Blue Key. One of these is granted to a needy lower division student of regular standing who has actively participated in student affairs, and the second to an entering freshman who has an outstanding record of achievement in high school activities.

**CAP AND GOWN.** Two $50 scholarships are awarded annually to upper division women students who have attended San Diego State College for at least one year previous to date of making application and who have maintained at least a "B" average in scholarship for their entire college career. The scholarships are made available through the San Diego State College chapter of Cap and Gown.

**CHAMBER OF COMMERCE MUSIC SCHOLARSHIPS.** Several scholarships of $30 per semester have been made available by the San Diego Chamber of Commerce to players of the following instruments in the college band: Solo cornet, solo clarinet, first French horn, first trombone, first baritone, first Sousaphone, and first drum. Applications are filed directly with the Music Department.

**DAUGHTERS OF THE AMERICAN REVOLUTION.** Two scholarships of $25 each are presented each spring, one to a young man and the other to a young woman outstanding in citizenship and Americanism. Applicants should have at least a "B" average in scholarship, should be able to demonstrate need for financial assistance, and should have junior standing in the college when selected. The scholarships are made available through the Daughters of the American Revolution.

**DELTA SIGMA THETA (Beta Mu Chapter).** From time to time, Delta Sigma Theta awards scholarships of varying amounts to selected applicants.

**FACULTY DAMES.** Two scholarships of $50 each are given annually to deserving women students selected by the Loans and Scholarships Committee.

**FOOTLIGHTS THEATRE, INC.** On various occasions awards of $50 each are made to students for outstanding achievement in dramatic arts.

**INTERSORORITY COUNCIL.** A $50 scholarship, $25 each semester, is made available each year by the Intersorority Council of San Diego State College to the sorority woman applying with the highest grade point average. The applicant must be an upper division student carrying at least twelve units, and must have attended San Diego State College at least one year previous to the date of application.

**MARCY, MAY FINNEY.** Scholarships of varying amounts are awarded from time to time by the committee administering the May Finney Marcy Fund to selected San Diego State College students, preferably members of Cap and Gown. Inquiries concerning eligibility for these awards should be addressed to the Dean of Women.

**NATIONAL CITY ELEMENTARY TEACHERS' CLUB.** One $50 scholarship is awarded to a senior student majoring in elementary education. The recipient must have at least average grades and should preferably be a graduate of Sweetwater High School.

**NORTH PARK KIWANI-ANNES.** One scholarship of $50 a semester is awarded by the North Park Kiwani-Annes to a male student preparing for teaching. The recipient must have at least junior standing at the time of selection.

**P.E.O. (ER Chapter).** An award of $15 a month is granted by the ER Chapter of P.E.O. to a woman student enrolled in the college.

**SAN DIEGO BASEBALL CLUB.** An annual scholarship of $250, made available by the San Diego Baseball Club, is distributed to San Diego State College athletes with a principal interest in baseball. Recipients are selected by the Director of Athletics of the college.

**SAN DIEGO CITY TEACHERS ASSOCIATION.** Two scholarships of $50 each are presented each year to prospective teachers with no restrictions as to college year. Applications are made on forms supplied by the San Diego City Teachers Association and are reviewed by the association's committee on scholarships. Personal interviews are required.

**SAN DIEGO COUNTY TEACHERS ASSOCIATION.** Two $50 scholarships, made available annually by the San Diego County Teachers Association, are awarded to students in the field of elementary education. Selections are made by the faculty Loans and Scholarships Committee.

**SAN DIEGO ENGINEERS CLUB.** A scholarship of $50 is given each semester by the San Diego Engineers Club to a student majoring in engineering who shows particular ability in that field. The Loans and Scholarships Committee recommends three candidates from all students applying, which candidates in turn are interviewed by the members of the Engineers Scholarship Committee, who make the final selection.

**SKULL AND DAGGER.** Skull and Dagger of the San Diego State College awards $25 annually to each of two students judged to possess superior talent in drama. Selections are made by Skull and Dagger.

**TAU ZETA RHO ALUMNAE.** A scholarship of $50 is given annually by the alumnae chapter of the Tau Zeta Rho sorority of the San Diego State College to a nonsorority woman student enrolled in either her junior or senior year of teacher training.

**THEATRE GUILD.** One or two $25 awards are made each year by the Theatre Guild of the San Diego State College. The guild selects students outstanding in theatrical work.

**WALKER, RALF MARC.** A scholarship in the amount of $500 is made available by the Walker-Scott Corporation in memory of the late Mr. Ralf Marc Walker to a woman student majoring in merchandising or retail trade at the San Diego State College. The scholarship is presented to a girl in Walker's Hi-Debber Council each year. The total scholarship is deposited in the San Diego State College Foundation and is handed to the recipient at the rate of $50 a semester for each of the first three years and $100 a semester for the two senior semesters.

**WEINBERGER, HENRY, INTERFAITH SCHOLARSHIP.** A scholarship of $100 is awarded in April of each year to the student of any religious faith enrolled at the San Diego State College who is judged to have done the most to further interfaith ideals among the students of the college during the year of the award. This scholarship is made available by Mr. Henry Weinberger of the Lasher Lodge of B'nai B'rith.

**WOMEN'S AUXILIARY OF SAN DIEGO DENTAL SOCIETY.** An annual award of $100 is made available by the Women's Auxiliary of San Diego Dental Society to an outstanding male student in pre-dentistry.

**WOMEN'S CIVIC LEAGUE.** The Women's Civic League sponsors an annual award of $50 to a deserving woman student selected by the League.

## ADDITIONAL DONORS

Additional donors to scholarship funds or to the San Diego State College Foundation include the following:

Al Bahr Temple
Alpha Xi Delta
Associated Women Students
Auxiliary, San Diego County
  Medical Society
Baranov, Nate
Chamber of Commerce of San Diego
Dairy Mart
Del Mar Charities
Epsilon Pi Theta
Fox, George
George, William Robert
Goodwin, Percy
Gildred, Philip
Hale, E. T. and Sons
Heilbron, Frances
Kelly, Mr. and Mrs. Wilbur
Kiwanis Club of San Diego
Lions Club of San Diego
Milk Institute of San Diego County
Nida, W. L.
Pythian Sisters, Grand Temple
Ripley, Robert
Rotary Club of Escondido
Simpson, Fred
Small, Lucian K.
Solof's, Ltd.
Sundberg, R. H.
Thursday Club
Todd, O. W., Jr.
Anonymous

## LOANS

Both long-term and short-term loans are available to students who have attended the San Diego State College for at least one semester and who have demonstrated ability to do satisfactory college work. Applications for loans are made to the Committee on Loans and Scholarships through the offices of the Dean of Men or Dean of Women.

# ADMISSION AND REGISTRATION

## GENERAL ADMISSION REQUIREMENTS

High school graduates and other applicants possessing equivalent preparatio may be admitted to this college upon evidence of fitness to profit by college instruction such fitness to be shown by previous scholastic records, by evidence of good mora character and personal qualifications, and by satisfactory scores on tests which th college may require. Due to crowded conditions the college probably will have to refus all qualified applicants who do not file application blanks and official transcripts prio to the dates indicated in the calendar.

## ADMISSION OF HIGH SCHOOL GRADUATES

(1) A high school transcript must be presented showing satisfactory scholarship and (2) applicants must demonstrate readiness for college instruction by making satisfactory scores on such tests as the college may designate.

**Regular status** will be granted if the student has earned A or B grades in not les than 16 semester courses during the tenth, eleventh, and twelfth grades.

**Provisional status** will be granted if the student has earned A or B grades i not less than 12 semester courses during the tenth, eleventh, and twelfth grades Individuals who fall slightly below the above standard may be admitted to provisiona status if qualifying examination scores indicate probable success in college. Transfer t regular status may be attained upon completion of 24 or more units of college worl with grade average of C or better. Full credit is allowed for all regular college worl completed.

**Adult special status** may be granted an applicant who is over 21 years of ag or is a veteran of World War II, provided that he demonstrates through qualifyin examinations satisfactory ability to do college work. Such students may be transferre to regular status upon removal of all matriculation deficiencies and after completio of 24 or more units of college work taken in residence with grade average of C o better. Full credit is allowed for all regular college work completed.

## ADMISSION BY EXAMINATION

Certificates of successful examination before the College Entrance Examination Board will be accepted when candidates cannot meet the above scholarship requirements.

## SPECIAL STUDENTS

In exceptional cases, persons over 21 years of age or veterans of World War II who do not fully meet the college entrance requirements may be admitted as special students upon presentation of evidence showing good character and ability to do satisfactory work at this college. Non-high school graduates may be required to complete, in addition to the usual requirements for the A.B. Degree, three semester units of college work for each two semester courses lacking high school graduation. College graduate students who do not qualify for admission to graduate status (see admission to graduate status) may be admitted as special graduate students.

## ADMISSION WITH ADVANCED STANDING

Credit earned in recognized institutions of collegiate grade will be evaluated and advanced standing allowed accordingly toward the graduation requirements of this institution. Applicants must show an average grade of C or better for all college work, for the last college attended, and for the last semester of attendance in order to qualify for regular status. A student who enters with advanced standing is one who has completed at least 12 units of passing work in another collegiate institution. However, no applicant may disregard his collegiate record and apply for admission only on the basis of his high school work. No credit earned after a student has accumulated 64 units of work in all types of collegiate institutions may be transferred from a junior college.

Students seeking admission with advanced standing must furnish complete transcripts for all work attempted beyond the eighth grade. If an official evaluation is desired, a deposit of $2 must accompany the application and be received together with all transcripts at least 30 days before the date of registration. At least 45 semester units must be completed before a student may apply for an evaluation.

## ADMISSION TO GRADUATE STATUS

A student who holds a bachelor's degree from an accredited institution may be admitted upon application and the filing of official transcripts of all college work. A student not meeting these requirements in full may apply for admission as a special student.

Admission to graduate courses (numbered 200 to 299) is restricted to students (1) who hold a standard bachelor's degree from an accredited institution, (2) who receive a satisfactory score on graduate entrance examinations, (3) who meet the prerequisites for specific courses, and (4) who qualify under one of the following categories:

a. Admission to candidacy for the General Secondary Credential; or
b. Maintenance of a satisfactory grade point average in all postgraduate work; or
c. The course concerned is the first course taken from those numbered 200 to 299.

## EXTENDED DAY PROGRAM

In order to meet the needs of adults in the community for certain types of college work, this institution offers late afternoon and evening classes under an extended day program. Most of these courses are on the upper division and graduate levels and all carry full college credit. Among the fields in which work is offered are: Education, commerce, personnel work, and engineering. Courses may be set up to meet the need of a particular group who desire special instruction. Requests for such courses should be made through the office of the Dean of General Education. A special bulletin describing the current offerings is issued each semester from the above office.

## AUDITORS

Properly qualified persons may apply for admission to attend classes as auditors. Such students pay the same fees as those who take equivalent work for credit.

## TESTS REQUIRED AT REGISTRATION TIME AND LATER

1. A physical examination is required of all students entering or reentering the college after an absence of one semester or more, except that students carrying 6 units or less are not required to take the physical examination. This examination is scheduled during the orientation and registration period.

2. All entering students are required to take a college aptitude test. Exceptions may be made for graduate students and for those who register for five units or less and for those registered only in Extended Day classes.

3. All entering freshmen and college transfer students who present less than a minimum of 15 units of college credit must take the regular battery of achievement and aptitude tests. The freshman English course which a student will take will be determined by results of these tests.

4. Students entering teacher education should see admission requirements outlined under Admission to Teacher Education.

## LATE REGISTRATION

Students who register after the scheduled registration days are subject to a late registration fee of $2. Students may be accepted for late registration with the approval of the Reigstrar within two weeks after scheduled registration days. Registration will be closed after that date. Students failing to complete all registration requirements within the period allowed, as announced in registration instructions, are subject to cancellation of registration.

## CHANGES IN REGISTRATION

Petitions for changes in program may be secured at the Registrar's office. A fee is charged for changes in program after registration books are filed.

# FEES AND EXPENSES

## PROBABLE EXPENSES FOR ONE SEMESTER

An estimate of the expense of attendance for one semester is given below. estimate is made as to the cost of clothing, or other personal items, since these figu vary with the demands of the individual. Laboratory fees are additional.

### A Partial Estimate of Expenses

One Semester

| | *Minimum* | *Maxim* |
|---|---|---|
| Fees and deposits | $22.50 | $30.50 |
| Books | 18.00 | 30.00 |
| Board and room | 275.00 | ---- |
| Transportation, lunches, incidentals | 20.00 | 60.00 |
| Miscellaneous | | 5.00 |

Before enrolling in college, the student should possess sufficient resources to m the minimum expenses for one semester. A limited amount of clerical work in offi and in the library may be offered from time to time but ordinarily it is not sufficien remunerative to reduce expenses materially.

## LIST OF FEES AND DEPOSITS (SUBJECT TO REVISION)

### Enrollment Fees and Deposits

(Payable at time of registration)

| | |
|---|---|
| By all students: | |
| Tuition (auditors pay same fees as other students): | |
| Regular students (carrying over 5 units) | $6. |
| Limited students (carrying 5 units or less) per unit | 2. |
| Materials and service: | |
| Regular students | 6. |
| Limited students per unit | . |
| Student activity fees (not a State Fee): | |
| Regular students | 10. |
| Limited students | 3. |
| Associated Students Group Accident Insurance | 2. |

### Miscellaneous Fees and Deposits

(Fees payable when service is rendered)

| | |
|---|---|
| Change of program | $1. |
| Failure to meet administratively required appointment or time limit | 2. |
| Evaluation of records for non-matriculated students | 2. |
| Late registration | 2. |
| Transcript of record (1st copy free) | 1. |

### Graduation Fees

| | |
|---|---|
| State teaching credentials (each credential) | $3. |
| Diploma | 1. |

The credential fee is collected through the college by cashier's check or post offi money order made payable to the State Department of Education.

# GENERAL REGULATIONS

## INFORMATION

All inquiries relative to the college should be directed to the Registrar's Office.

## NUMBERING OF COURSES

Courses numbered 1 through 99 are in the lower division; those numbered 100 through 199 are in the upper division; and those numbered 200 or over are in the graduate division. Courses numbered 300 or over are professional education courses on the graduate level.

## SCHOLARSHIP, GRADES, AND GRADE POINTS

The following grades are used in reporting the standing of students at the end of each semester: A, excellent; B, good; C, fair; D, passed; F, failed; I, incomplete; E, conditioned (may be made up to grade of D); Cr, credit (without grade); WP, withdrawal passing; and WF, withdrawal failing.

Grades of I or E must be made up by the end of the next semester; otherwise the grade of F will be recorded.

Grade points are assigned as follows: Grade A, 3 points per unit; B, 2 points per unit; C, 1 point per unit; D, no point per unit; F or WF, no point per unit. Grades of I, Cr, or WP are disregarded in computing grade points. The grade of E is treated as no point per unit until a final grade is recorded. The number of grade points a student has earned in a subject is determined by multiplying the number of points he has received by the number of units allowed. The grade point average is determined by dividing the grade points earned by the number of units attempted. A student must earn at least a C average in all work undertaken at the college to qualify for a degree or a transcript of record with recommendation to another collegiate institution. Any course may be repeated, but not for additional credit; however, only the second grade earned is considered in the student's average.

## CLASS, UNITS OF WORK, AND STUDY LIST LIMIT

Students who have completed 0 to 29 units of work are classified as freshmen; 30 to 59 units as sophomores; 60 to 89 units as juniors; and 90 or more as seniors.

A unit of credit represents 50 minutes of lecture or recitation combined with two hours of preparation per week through one semester, or three hours of laboratory or field work in the case of laboratory credit.

Students are not ordinarily permitted to enroll for more than 16 units * for credit toward graduation. A normal semester's program is 15 units.

Certain exceptions to this rule exist. If during the preceding semester the student has carried at least 12 units *: (1) If a grade point average of at least 1.5 was earned, 17 units * may be carried for credit toward graduation; and (2) if a grade point average of 2.0 (B) was earned, 18 units * may be carried.

Exceptions to these regulations may be secured only through a petition to the Scholarship Committee.

No student may register for less than 12 units (the minimum full-time load) without the approval of the Dean of Arts and Sciences or the Dean of Education.

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* In addition to the required one-half unit physical education activity courses.

# PROBATION AND DISQUALIFICATION

## PROBATION

Any student whose scholarship record shows a cumulative deficit of 9 or more grade points below a C average for all college work undertaken will be placed on probation. Probationary status may be continued provided that the student does not increase his grade point deficiency. Probationary status will be continued until the student reduces his grade point deficiency to 8 or less.

## DISQUALIFICATION

Any student on probation whose scholarship falls below an average grade of C in any single semester is disqualified from further attendance at the college.

Any student who fails to pass two-thirds of the units attempted during any single semester is disqualified from further attendance at the college.

A disqualified student may be reinstated after an interval of one semester for reasons satisfactory to the Board of Admissions. Applications for reinstatement must be made on forms which may be obtained at the Office of the Registrar.

# WITHDRAWALS FROM CLASS

Forms for withdrawal from class may be obtained at the Registrar's Office. If a student withdraws from class during the first seven weeks of a semester, a grade of WP will be recorded upon his permanent record for each class which he has dropped. If he withdraws during the remainder of the semester, either an I or a WF will be recorded unless a grade of WP is approved by the proper dean. A grade of I automatically becomes an F unless the work is completed by the end of the next semester of attendance.

# TRANSCRIPTS OF RECORD

Students may secure upon request one transcript of record without fee. Thereafter, a fee of $1 is charged for each transcript secured upon request. Once a student has matriculated in this college, transcripts from other schools will not be returned, or copies of them made. No fees are charged for transcripts required for military purposes.

Transcripts in the possession of students are to be regarded as unofficial records.

# EVALUATIONS

An evaluation of credit for graduation should be requested by a student as soon as 45 units have been earned. Applications may be made at the Office of the Registrar. Students having met all admission requirements for the arts and sciences or teacher education curricula, who are carrying 6 units, or more, of college work in a regular semester, will not be charged the evaluation fee.

# ELIGIBILITY FOR DIRECTED TEACHING

No student shall be eligible for directed teaching (Education 116) leading to the Kindergarten-Primary, General Elementary, General Junior High, and Special Secondary Credentials who has not completed 75 units, been admitted to Teacher Education, and whose entire record, as well as for the preceding semester, does not average at least a 1.2 grade.

No student shall be eligible for directed teaching (Education 316) leading to the General Secondary Credential who has not been admitted to the teacher education program prescribed for admission to candidacy for this credential.

# THE HONORS GROUP

All students who at the end of the sophomore year have attained a grade-point average of 2.5, and such others as have attained a high average in the department in which their major is selected, and who have received the recommendation of that department and the consent of the Committee on Honors, may if they so elect, constitute an honors group, for special treatment in their major subject.

Such students, so far as the facilities of the department and the best interests of the students under its charge allow, shall be treated as befits their individual needs and as their individual capacities warrant. They shall be eligible to enroll in honors or special study courses, although credit in such courses shall be limited to 5 units a semester. They shall not be held to regular attendance in the established courses of their departments if, in the opinion of the instructor, the course requirements can be met through special assignments and examinations or by satisfactory performance in the regular examinations in the course. With the consent of the major department, requirements concerning minors and specific courses or sequences in the major may be set aside. Each honor student shall be assigned to a member of his major department for advice and direction.

Students in the honors group who fail to take advantage of the opportunities there offered may at the end of any semester be transferred by the department to the general course. Students in the general course who show unusual capacity, upon recommendation of the department and the Committee on Honors, may at the end of any semester, be transferred to the honors group if such transfer appears practicable.

Students who wish to apply for entrance into the Honors group may do so by filling out cards to be obtained from the Registrar's Office. The application should be approved by the major department and by the Honors Committee within the first week of registration. Units earned by students doing individual study under this plan will be recorded under the symbol 166 and will be subject to the formulated rules dealing with limitations of student load.

## THE DEGREE WITH HONORS AND WITH DISTINCTION

Upon recommendation of the Committee on Honors, graduation with honors shall be granted to the upper 10 percent of the graduating class. Each department shall determine which students it will recommend for distinction in the major field at graduation, and report its recommendation to the Committee on Honors for transmission to the faculty.

## EXAMINATIONS

No final examinations shall be given to individual students before the regular time. Any student who finds it impossible to take a final examination on the date scheduled must make arrangements with the instructor to have an incomplete grade reported and must take the deferred final examination not later than the end of the first semester of attendance following that in which the incomplete was given. No exception shall be made to this rule without the approval of the Dean of Arts and Sciences or the Dean of Education and the instructor concerned.

## CREDIT FOR EXTENSION COURSES

The amount of credit for extension and correspondence courses acceptable in fulfillment of the requirements for the Bachelor of Arts Degree will depend upon the nature of the courses, the quality of the work done, and the student's preparation for work in the field of the course. The college ordinarily limits credit to such courses as have been approved, and the total of such acceptable credit to 12 units. **Extension courses are not accepted for graduate credit.**

## CREDIT GRANTED FOR MILITARY SERVICE

Six units of lower division elective credit will be granted to students who have served in the armed forces of this country upon the completion of the prescribed basic training program before January 1, 1947. Documentary evidence bearing the signature of the proper commanding officer must be filed before credit will be accorded to the student.

Additional units of credit may be granted to students who can document the fact that they have completed officer's or other specialized training, and have been assigned to active military duty before January 1, 1947.

Completion of one semester's work, or 12 units, at this college after military service, is required before military credit will be granted.

# THE BACHELOR OF ARTS DEGREE

## GENERAL REQUIREMENTS FOR THE BACHELOR OF ART DEGREE IN TEACHER EDUCATION AND IN ARTS AND SCIENCES

### TYPES OF CURRICULA

San Diego State College offers two types of curricula leading to the A.B. Degre

(1) The curricula leading to the California teaching credentials,
(2) The arts and sciences curricula.

### GRADUATION REQUIREMENTS

(a) A minimum of 120 semester units of college work representing a four-ye course is required for graduation.

(b) Twenty-four units of work, ordinarily taken in the senior year, must earned at this college.

(c) At least a C average in scholarship must be maintained in all college wo attempted, in all work within the major field, and in all work taken at this colleg

(d) At least 40 units must be completed in the upper division, 30 of which mu be earned after all lower division requirements have been satisfied.

(e) Student must comply with the State requirements in United States Const tution, American history, institutions, and ideals.

(f) All major, minor, and specific curriculum requirements must be met.

## LOWER DIVISION REQUIREMENTS FOR ALL CURRICULA

| | *Uni* |
|---|---|
| Physical Education | 2 |
| Health Education 21 | 2 |
| English | 6 |
| Psychology | 3 |
| Foreign Language (not required in commerce, engineering, or in teacher education in the elementary, junior high and special secondary curricula) | 0–1 |
| Mathematics A and B, 6 units, or high school algebra and geometry | 0– |
| Social Sciences | 12 |
| Natural Sciences | 12 |
| Electives to make total of 60 units, including lower division preparation for the major and minor. | |

### EXPLANATION OF LOWER DIVISION REQUIREMENTS

**English**

The English requirement should be satisfied in either the freshman or sophomo year. Unless departmental regulations specify other courses, the student should satis this requirement by taking English 1 and either English 2 or any optional cour approved by the English Department. English majors are not required to take En lish 2. The prerequisite for English 1 is a passing mark in the English A qualifyi examination or completion of the course in English A. Credit in English A may be us toward graduation but not in satisfaction of the 6-unit lower division requirement English.

**Psychology**

The requirement in psychology should ordinarily be satisfied in the freshma year by completion of Psychology 1.

### Foreign Languages

At least 10 units in one foreign language are required in the lower division except that no language is required in commerce, engineering, or in teacher education in the elementary, junior high, and special secondary curricula. No degree credit is given for only the beginning college semester of a foreign language (except Spanish 70).

*Reduction of unit requirement.* High school work completed with grade of C or better for the final semester of a year course in foreign language may meet the foreign language requirement in part. Each year course completed in high school in any foreign language is counted in satisfaction of 3 units of this requirement. A total of 9 units so credited will satisfy in whole the foreign language requirement. If two or more years have elapsed since the completion of a high school course in any foreign language, the final year of the high school course may be repeated for college credit. Foreign language courses for which a D grade was received in the final semester of a year course in high school may also be repeated for college credit. The student should register in a college foreign language course for credit as follows:

| *Year courses completed in high school* | *If completed with grade of C or better, register as follows* | *Maximum credit allowed toward graduation* |
|---|---|---|
| 1 year | Course A, 5 units | 2 units |
| 2 years | Course B, 5 units | 4 units |
| 3 years | Course C, 3 units | 3 units |
| 4 years | Course D, 3 units | 3 units |

| *Year courses completed in high school* | *After lapse of 2 years or D grade, may register in* | *Maximum credit allowed toward graduation* |
|---|---|---|
| 1 year | Course A, 5 units | 5 units |
| 2 years | Course A, 5 units | 2 units |
| 3 years | Course B, 5 units | 4 units |
| 4 years | Course C, 3 units | 3 units |

### Social Sciences

Twelve units, at least 8 of which are in the lower division, selected from two or more of the following fields in social science are required: anthropology, economics, geography (except 1, 3 and 4), history, political science, social science, and sociology. Eight of the 12 units must be in the lower division. (Note: Courses in commerce, home economics, library science, philosophy, or psychology may not be used in satisfaction of this 12-unit social science requirement.)

*Reduction of unit requirement.* Two high school semester courses in the fields of history, political science, sociology, and economics taken in the senior year with grades of B or better may be used to reduce the 12 unit social science requirement to 9 units.

### Natural Sciences

Twelve units, at least 8 of which are in the lower division, selected from courses representing each of the following groups, are required:

*(a) Life sciences.* Courses must be selected from one of the following fields: bacteriology, biology, botany, physiology, or zoology. This requirement may be satisfied by completion of a year course in high school or by a semester course in college (recommended: Biology 1). If laboratory credit is desired, select from life science courses listed in section (c) below.

*(b) Physical sciences.* Courses must be selected from the following fields: astronomy, chemistry, Geography 1 or 3 (but not both), geology, physical science, or physics. A semester course in college in any one of these subjects will satisfy this requirement. This requirement may also be satisfied by completion of a year course in high school chemistry or physics. (Students who expect to satisfy this requirement by a physical science course in college should register for the following: those who have not completed a year course in high school in either physics or astronomy, should take Physical Science 1A; those who have not completed a year course in high school in either chemistry or geology should take Physical Science 1B.) If laboratory credit is desired, select from physical science courses listed in section (c) below.

*(c) Laboratory course in natural sciences.* This requirement may be satisfied by completion of a year course in high school with grade of C or better for the final semester of the junior or senior year in one of the following fields: botany, chemistry, physics, or zoology. The laboratory requirement may be satisfied by one of the following college courses:

*Life Sciences*

Bacteriology 1
Biology 10A and 10B
Botany 2A or 2B
Physiology 1C
Zoology 1A or 1B

*Physical Sciences*

Chemistry 1A or 1B
Chemistry 2A and 2B
Geology 1A and 1B
Physics 1A and 1B or 1C and 1D
  or 4A and 4B or 4B and 4C
Physics 2A, 2B, 3A, and 3B
Astronomy 1 and 9 and 10

*Reduction of unit requirements.* The 12 unit natural science requirement may be reduced to 9 units by completion of a high school year course in biology, botany, chemistry, physics, physiology, or zoology taken in the senior year with grade of B or better for the final semester.

### Mathematics

Mathematics A (elementary algebra) and Mathematics B (plane geometry) are required. This requirement may be satisfied by completion of a year course in high school in algebra and a year course in plane geometry with grade of C or better for the final semester of each course. College credit will be granted for completion of Mathematics A or B unless the corresponding high school course was completed with grade of C or better in which case the repeated course will be classified as a "refresher" course carrying no college credit. Students having one semester high school credit in trigonometry, intermediate algebra or solid geometry may repeat the corresponding course in college for 1½ units of college credit.

### Lower Division Preparation for the Major and Minor

For description of requirements for majors and minors in teacher education, see section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Teacher Education.

For description of requirements for majors and minors in arts and sciences, see section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences. Specific requirements for each major and minor are listed in connection with the description of courses in each major field. See section entitled: Announcement of Courses.

# UPPER DIVISION REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN ARTS AND SCIENCES

## MAJORS IN ARTS AND SCIENCES

The arts and sciences curricula lead to the Bachelor of Arts Degree with majors in **art, chemistry, commerce, economics, engineering, English, French, geography, history, life science, mathematics, music, physics, political science, psychology, sociology, Spanish, speech arts, and zoology** and qualify for graduate work in these fields in recognized American colleges and universities. Completion of the requirements of these curricula also enables the graduate to satisfy undergraduate requirements for the general secondary credential which, with graduate work, will enable the holder to teach in a senior high school or junior college.

## MINORS IN ARTS AND SCIENCES

Minors must be established in one of the following fields: **anthropology, art, botany, chemistry, commerce, comparative literature, economics, education, engineering, English, French, geography, geology, health education, history, home economics, journalism, life science, mathematics, music, philosophy, physical education, physics, political science, psychology, recreation, sociology, Spanish, speech arts, and zoology.**

## UPPER DIVISION REQUIREMENTS

### Preparation for Upper Division

Students must complete the lower division requirements for all curricula. In addition, lower division requirements for the major and minor must be completed. Refer to the section of this bulletin entitled: Announcement of Courses, and to the outlines of curricula in the section entitled: Preprofessional and Vocational Curricula.

### Minimum Units and Credit Limitations

Major and minor work are required as follows:

| | *Units* |
|---|---|
| Minor (minimum in upper division courses) | 9 |
| Major (upper division courses) | 24 |

At least 40 units in upper division courses must be completed, 30 of which must be earned after all lower division requirements have been satisfied. If a student is approaching upper division standing, he may carry sufficient lower division units to complete the required minimum of 60 units and carry upper division units for the remainder of his study load. Students with sophomore standing may carry upper division courses for upper division credit provided that they have the written approval of the chairman of the department and the Dean of Arts and Sciences or Dean of Education.

## MAJORS AND MINORS

### Majors

The specific requirements for each major are listed at the beginning of each departmental division among the description of courses. (See Announcement of Courses.) The student is advised to choose his major as early in his college course as practicable so that he may be able to plan his work according to the major requirements. Failure to meet the lower division requirements of the major department before the junior year may make it impossible to satisfy the upper division requirements within the normal period of two years. In addition to departmental majors, the following majors are also offered:

**The General Major:** The general major of 36 upper division units must be chosen from three fields with not more than 15 units nor fewer than 6 to 9 units from any one field. A minimum of a year course in each field must be completed in the lower division as foundation for upper division work in the general major. A minor is not required; however, 4 additional upper division elective units must be completed to meet the minimum requirement of 40 upper division units for graduation.

The general major is planned for students who are preparing for home arts, law, journalism, library work, public administration, social work, theology, recreation, or for any other vocation requiring a background of general training. The program of the student should be planned in consultation with the Dean of Arts and Sciences and approved, revised, or rejected by the chairmen of the departments represented in the major.

**Life Science Major:** Lower division requirements: Zoology 1A-1B or Biology 10A-10B; Zoology 20; Botany 2A-2B; Chemistry 1A-1B or 2A-2B; Physics 2A-2B-3A-3B. Recommended: Geology 1A, Astronomy 1. Upper division requirements: A minimum of 24 upper division units in zoology and botany of which 6 units may be from a related field. The plan for this major must be with the approval of the Chairman of the Division of Life Sciences.

### Minors

A minor consists of at least 15 units of work completed in one of the above fields of study. At least nine of these units must be earned in upper division courses. The entire requirement for a minor may be met with upper division courses provided these courses have no lower division prerequisites. Prerequisites for each course are listed among the course descriptions. (See section on Announcement of Courses.)

In addition to the departmental minors listed above, the following minors are offered:

**Minor in Life Science:** Lower division requirements: Biology 10A-10B or equivalent; Zoology 20; Chemistry 2A-2B or 1A. Recommended: Astronomy, geology, physics. Upper division requirements: At least 9 upper division units in zoology and botany to be selected with the approval of the Chairman of the Division of Life Sciences.

**Minor in Recreation:** Students must show credit for 4 semesters of physical education activity courses and in addition a minimum of 6 lower division units to include Physical Education 51, 53, and electives chosen from Art 61B or fields of dance, drama, or music. Upper division courses must include a minimum of 9 units, including Physical Education 165, 170, and 199. Consultation with the Chairman of the Division of Health, Physical Education, and Recreation is advised.

## EXAMINATION REQUIREMENTS IN THE UNITED STATES CONSTITUTION AND AMERICAN HISTORY, INSTITUTIONS, AND IDEALS

Each student of a state college to qualify for graduation shall demonstrate competence in the United States Constitution and American history, institutions and ideals, by passing satisfactorily a comprehensive examination on these fields prepared and administered by the college. Students transferring from other institutions of collegiate grade who have already met this requirement may have this examination waived, except that candidates for a teaching credential must meet the United States Constitution requirement by examination or by completion of a course covering the Constitution in a California institution of collegiate grade. The examination ordinarily should be taken in the junior year.

This graduation requirement may be fulfilled by any one of the following alternatives:

1. Passing satisfactorily comprehensive examinations in both United States Constitution and American history, institutions and ideals.
2. Completion of History 17A and 17B, or History 171A and 171B, or History 172A and 172B, or Political Science 139A and 139B.
3. Completion of Political Science 71A and 71B, or Political Science 101, plus satisfactory completion of an examination in American history, institutions and ideals.
4. Completion of History 8A and 8B, or History 173A and 173B, or History 179A and 179B, plus satisfactory completion of an examination on the United States Constitution or the substitutes for that examination enumerated in item 3.
5. Completion of comparable courses in other institutions of collegiate grade, except that candidates for the A.B. Degree and a teaching credential must have completed the course covering the United States Constitution in a California institution of collegiate grade.

## PROFESSIONAL, PREPROFESSIONAL, AND VOCATIONAL CURRICULA

For description of professional curricula in education, see section entitled: Professional Curricula in Education; for preprofessional and vocational curricula, see section entitled: Preprofessional and Vocational Curricula.

# UPPER DIVISION REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN TEACHER EDUCATION

## TEACHING CREDENTIALS

San Diego State College is authorized by the State of California to recommend students for the teaching credentials listed below. To be recommended, students must complete, or have completed, the A.B. Degree in one of the curricula offered for teachers.

| *The credential* | *Subjects and grades for which it is valid* |
|---|---|
| General Elementary | All grades through the eighth. |
| Kindergarten-Primary | Kindergarten through third. |
| General Junior High (Must be taken with another credential) | All subjects in grades seven, eight and nine in all elementary or secondary schools. |
| General Secondary | All subjects in the public schools in grade 7 and above. |
| Health and Development | Authorizes to serve as supervisor of health in the capacity of a school physician, school nurse, school oculist, school optometrist, school otologist, school audiometrist, school dentist, school chiropodist, or school dental hygienist. |
| Special Secondary in Art | Art in all grades of the public schools. |
| Special Secondary in Business Education | Business education subjects in all grades of the public schools. |
| Special Secondary in Music | Music in all grades of the public schools. |
| Special Secondary in Physical Education | Physical education in all grades of the public schools. |
| Special Secondary in Speech Arts | Speech in all grades of the public schools. |
| Special Secondary in Correction of Speech Defects | Correction of speech defects in all grades of the public schools. |
| Special Secondary for teaching the Mentally Retarded Child | To teach mentally retarded children in elementary and secondary schools. |
| School Psychometrist | To serve as assistant to the school psychologist. |
| Administration in Elementary Education | Authorizes for certificate to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in elementary schools. |
| Supervision in Elementary Education | Authorizes for certificate to supervise instruction in elementary schools. |
| Administration in Secondary Education | Authorizes for certificate to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in secondary schools. |
| Supervision in Secondary Education | Authorizes for certificate to supervise instruction in secondary schools. |
| Special Subject Supervision | Supervision in the special subject in all grades. |

## COMBINATION OF CREDENTIALS

Students who seek more than one teaching credential must complete in full the curriculum for each, with only such exceptions as are indicated in the statement of requirements.

A combination of the elementary school credential and the junior high school credential may be secured by completing the requirements for the elementary school credential and the following additional requirements:

(a) A teaching major.
(b) Education 100B in the major field.
(c) Three units of directed teaching, or equivalent, in a junior high school.
(d) Education 115B.

A combination of the junior high school credential and a special secondary credential may be secured by completing the requirements for the special secondary credential and the following additional requirements:

(a) A junior high school teaching major, excluding the special secondary credential majors.
(b) Education 100B in the junior high school teaching major.
(c) Three units of student teaching in the junior high school teaching major.

## EXAMINATION REQUIREMENTS IN THE UNITED STATES CONSTITUTION, AMERICAN HISTORY, INSTITUTIONS, AND IDEALS

This requirement is the same as that for the degree in arts and sciences. For specific explanation, refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

## UPPER DIVISION REQUIREMENTS

### Preparation for Upper Division

Students in teacher education curricula must complete the lower division requirements for all curricula as indicated in the section entitled: General Requirements for the Bachelor of Arts Degree in Teacher Education and in Arts and Sciences. Additional pattern requirements are outlined under each specific curriculum on the following pages.

### Minimum Units and Credit Limitations

A minimum of 40 units in upper division courses must be completed, 30 units of which must be earned after all lower division requirements have been satisfied. If a student is approaching upper division standing, he may carry sufficient lower division units to complete the required minimum of 60 units and carry upper division units for the remainder of his study load. Students with sophomore standing may carry upper division courses for upper division credit provided that they have the written approval of the chairman of the department and the Dean of Education.

A maximum of 40 units of credit in any one subject matter field or in education courses may be applied toward the requirements of the A.B. Degree.

### Preparation for Graduate Work

Students who take the A.B. Degree with a special credential and who contemplate doing graduate work for a master's degree in an academic field or for the general secondary credential, will find it advantageous to use their electives to provide a foundation for that work.

## MAJORS AND MINORS

All teaching curricula require one major and one minor.

### Major and Minor for the Elementary Credential

**Education** shall be the major for the kindergarten-primary and general elementary school credentials. Its requirements are outlined under those curricula. It is recommended that the minor for these credentials be chosen from the academic fields of **English, foreign languages, mathematics, science or social science.** The minor in social science must include 6 upper division units in history or in geography and 3 units selected from anthropology, economics, geography, history, political science, or sociology. The minor in English must include three units in American Literature. A second minor, though not required, may be chosen from one of these fields or from art, home economics, industrial arts, music, physical education or speech arts. Students taking an elementary credential in combination with a special secondary credential may use the special major for their minor in elementary education.

### Teaching Major for Junior High School and Special Secondary School Credentials

A teaching major for the junior high school credential consists of a minimum of 24 units of which a minimum of 18 units must be in the upper division. An average of C in scholarship is required in all upper division courses in the field of the teaching major. Teaching majors may be established in the following fields: **English, foreign languages, general science, mathematics, and social science.** A teaching major in the special secondary credential curricula of art, business education, music, physical education, and speech arts ranges from 24 to 40 units, depending upon the curriculum; these may not be used for a junior high school credential major. Refer to the following pages for outlines of requirements for these credentials.

*A Teaching Major in English* shall include English 1; 6A; 56A-56B or 60A-60B; and 18 units of upper division work. This credit must include 3 units in American Literature and 3 units in Shakespeare. Recommended: English 192.

*A Teaching Major in General Science* shall include a minimum of 24 units, not less than 18 of which are upper division, including a college year course in a biological science, a year course in high school or college physics and a concentration of 12 units, at least 6 of which are upper division, in one major subject (botany, chemistry, physics, zoology). See definition of teaching majors.

*A Teaching Major in Social Science* shall include a minimum of 24 units, not less than 18 of which are upper division. There shall be a concentration of 12 units, at least 6 of which are upper division, in one major subject (anthropology, economics, geography, history, political science, sociology). A year course in American History must be included. See definition for teaching majors for the junior high school credential.

### Teaching Minor for Junior High and Special Secondary Credentials

A teaching minor consists of 15 units in a given field, of which 9 or more must be in upper division courses. Teaching minors may be established in the following ields: **art, business education, English, foreign languages, general science, health education, home economics, industrial arts, mathematics, music, social science, physical education, recreation, and speech arts.** (See requirement above for elementary school credentials.)

*A Teaching Minor in English:* Candidates for the teaching minor in English must nclude English 1; 6A; and 9 elective units in upper division English. This credit must nclude 3 units in American Literature, taken either in lower division or in upper ivision. Credit in journalism and speech arts may not be used to fulfill the requirements for the English minor.

*A Teaching Minor in Health Education* shall include: Physical Education 51, Home Arts 61A, and Health Education 65 in the lower division; Health Education 52, 153, Physical Education 199 or equivalent in the upper division. For physical ducation majors, Health Education is allowed only as a second minor area.

*A Teaching Minor in Home Economics* shall include: Home Economics 5, or 62, and 11 in the lower division; Home Economics 101, 105, and 150, in the upper division. hree units of electives may be chosen from Home Economics 1, 62, 108, or 170.

*A Teaching Minor in Industrial Arts:* This minor shall consist of 15 units in ndustrial arts, 9 units of which must be from courses carrying upper division credit. ourses must be selected with approval of the Industrial Arts representative.

*A Teaching Minor in Music:* Candidates for the teaching minor in music a required to take music aptitude tests at the time the minor is chosen and to enroll i at least one music activity each semester. In special cases this requirement may b waived by permission of the faculty of the Music Department.

Applicants for music minors must maintain a grade average of C in all musi courses. All students must show credit for Music 1A or clear this requirement b examination. Music 7A is required of all candidates for the elementary credentia In the lower division, with the proper regard for course sequences, 6 units may chosen from the following courses: Music, 1A-1B-1C-1D, 2A, 3A, 4A, 4B, 5A, 5 6A, 16, 17, 18, Aesthetics 1A, 1B. Nine units of upper division music are require not more than two of which may be selected for credit from the activity courses (Trebl Clef, orchestra, etc.).

*A Teaching Minor in Physical Education:* Men must show credit for: fou semesters of physical education activity courses, Physical Education 51, 53 and 72 i the lower division; Education 100B-PE, Physical Education 170, 190 and at least tw units in an upper division Professional Activity course approved by the department.

Women must show credit for: four semesters of physical education activit courses, Physical Education 53, and 3½ units of electives in the lower division; nin units chosen from Physical Education 153, 156A-156B, 161, 164 and 170 in the uppe division.

*A Teaching Minor in Recreation:* A teaching minor in recreation shall includ 4 semesters of physical education activity courses and in addition Physical Educatio 51, 53, 165, 170 and electives selected from Art 61B or from the fields of dance, dram or music. The upper division must include Physical Education 199, Special Study i Physical Education or Recreation, to meet the individual needs of the student; to b planned in consultation with the Chairman of the Division of Health, Physical Edu cation, and Recreation. Physical Education majors may use this as a second mino only.

*A Teaching Minor in Social Science:* A teaching minor in social science mus include the general education lower division requirement and in addition a minimu of 9 units of upper division social science courses, selected from anthropology, ec nomics, geography, history, political science, or sociology, 6 units of which must consis of a year course sequence. Six units in American History or 3 units in American Hi tory and 3 units in Political Science must be included.

### Teaching Majors for General Secondary Credential

Teaching majors may be established in the following fields: **art, business edu cation, chemistry, economics, English, history, life science, mathematics, musi physical science, physics, romance languages, social science, Spanish, and speec arts; also psychology as a nonteaching major with two teaching minors.** In mos fields, 12 semester units are required in the lower division and 24 semester units i the upper division. Some departments permit 6 units of these 24 upper division unit to be selected from related fields with the approval of the departmental representativ In addition to these undergraduate requirements, 2 to 5 semester units of graduat work are required in the major field during the postgraduate year. For the program for each department, refer to the section entitled: Curricula Leading to the Gener Secondary School Credential. This section also explains the requirements for admissio to candidacy for the General Secondary Credential. Candidates for the General Secon ary Credential should consult with the Director of Secondary Education.

### Teaching Minors for the General Secondary Credential

Teaching minors may be established in the following fields: **art, business edu cation, chemistry, economics, English, French, health education, history, hom economics, industrial arts, life science, mathematics, music, physical educatio for men, physical education for women, physics, recreation, Spanish, and speec arts.** In most fields, 6 semester units are required in the lower division and 9 semeste units in the upper division for the A.B. Degree. This credential requires enough addi tional units to make a minimum of 21 semester units to be completed by the date o recommendation for the credential. For the programs for each department, refer to th section entitled: Curricula Leading to the General Secondary School Credential.

## ADMISSION TO TEACHER EDUCATION

Students who expect to become teachers should apply for admission to teacher education during the first semester of the sophomore year. Students entering the college at the end of the sophomore year will apply at the beginning of the junior year. No courses in education may be taken until admission is granted; any exception to this rule must have the approval of the Dean of Education. *Admission to the college* does not guarantee that the student will be admitted to teacher education. The following requirements must be met for admission to teacher education curricula:

1. A satisfactory score on a college aptitude test taken at the college.
2. Evidence of competence in the use of the English language and of satisfactory ability in arithmetic, handwriting, reading, and spelling indicated by having passed the Fundamentals Test. (See college calendar for dates of test which should be taken in the second semester of the *freshman year.*)
3. Assurance of correct speech habits and voice control by having satisfactorily completed a course in corrective speech or by having passed a speech test given by the college.
4. Assurance of physical fitness.
5. If the student is to be a candidate for the general secondary credential or one of the special secondary credentials, he must furnish a recommendation from the chairman of that department stating that the student has ability and shows promise of teaching success in his field and that the department looks with favor upon his application.
6. The completion of the first two years or more of a given curriculum, or its equivalent, and of subsequent work with a grade point average of 1.2 or better for all credentials except the general junior high school or the general secondary, for which shall be required a grade point average of 1.5 or better in all work and 1.75 in the major field.
7. If the student is a candidate for any credential on the secondary school level (general junior high school, special secondary, or general secondary), he must have a satisfactory score on a General Culture Test.
8. If the student is a candidate for the General Secondary credential he must have a tentative program approved by the authorized departmental representative of his major field, minor field, and the education department.
9. All applicants need to be approved by an interviewing committee of the college faculty. In its evaluation the committee will consider the following factors established by the State Board of Education: intelligence, scholarship, professional aptitude, personality and character, speech and language usage, and many-sided interests.

### Transfer Students

Students who have completed two or more semesters of work in another college, upon transferring to San Diego State College, should make application for admission to teacher education as soon as they enroll in the college. Transfer students should take the necessary tests for admission to teacher education given during the orientation period. (See college calendar for dates.)

### Transfer Students With Emergency Credentials in Elementary Education

Certain adaptations in the education courses have been made to meet the needs of experienced teachers who hold an emergency credential in elementary education. See the Director of Elementary Education for details.

### Advanced Standing in Teacher Education

A minimum of 6 units in education courses is required for graduation from this college. The college also requires that the student file with the Registrar written evidence from employers of satisfactory teaching experience in a public school.

After an interval of 5 years, courses in education are reevaluated and subject to deduction in credit, in light of such new requirements as may have been put into effect and changes in educational procedures. Students formerly in attendance will not be considered to be working in the curriculum until an evaluation and statement of credit has been secured from the Registrar's office. All courses taken either at this college or elsewhere must be approved by an official adviser in order to be credited oward meeting degree requirements.

### Admission to Graduate Courses (200-299)

For requirements for admission to 200-299 courses, refer to the section entitled: Admission and Registration.

# PROFESSIONAL CURRICULA IN EDUCATION

Professional curricula in education, requiring from four to five years to co plete, lead to the teaching credentials.

All candidates in teacher education curricula should observe carefully the requi ments for admission to teacher education and be prepared to meet them at the end the sophomore year. Students in other colleges who contemplate transferring to S Diego State College should arrange their programs so as to meet the requirements their particular curriculum as early as possible. See college calendar for dates wh the Fundamentals Test will be given. Refer to the section entitled: Admission Teacher Education.

## CURRICULA LEADING TO THE GENERAL ELEMENTARY, KINDERGARTEN-PRIMARY, OR GENERAL JUNIOR HIGH SCHOOL CREDENTIAL

### A.B. DEGREE WITH GENERAL ELEMENTARY OR KINDERGARTEN-PRIMARY CREDENTIAL

One teaching minor is required. Refer to the section entitled: Upper Divisi Requirements for the Bachelor of Arts Degree in Teacher Education.

### Freshman Year

| | *Units for General Elem.* | *Units fo Kdg.- Primar* |
|---|---|---|
| *First Semester* | | |
| Art 6A, Design | 2 | 2 |
| English 1, Freshman Composition | 3 | 3 |
| Health Education 21, Principles of Healthful Living | 2 | 2 |
| Physical Education (activity course) | ½ | ½ |
| Physical Science 1A, Introduction (If year-course in high school physics completed, substitute another science) | 3 | 3 |
| Electives (Advisable to start social science or other lower division requirements; also minor. See page 17) | 6 | 6 |
| *Second Semester* | | |
| Art 6B, Design | 2 | 2 |
| English 2, Freshman Literature or optional course | 3 | 3 |
| Physical Education (activity course) | ½ | ½ |
| Physical Science 1B, Introduction (If year-course in high school chemistry completed, substitute another science) | 3 | 3 |
| Psychology 1, General | 3 | 3 |
| Electives (Continue social science, other lower division requirements, or minor) | 3–5 | 3–5 |
| | 31–33 | |

### Sophomore Year

| | *Units for General Elem.* | *Units for Kdg.-Primary* |
|---|---|---|
| *First Semester* | | |
| Art 61A, Crafts in the Elementary Schools | 2 | 2 |
| Biology 1, Survey of Biology (If no previous science laboratory, take Biology 10A-10B or Botany 2A. Not required if year-course in high school biology, botany, physiology, or zoology completed. See page 18) | 3 | 3 |
| Geography 1, Elements (natural science credit) | 3 | 3 |
| Music 1A, Musicianship—Fundamentals of Music | 3 | 3 |
| Music 28A, Piano (or equivalent by examination, but without credit. May be taken in the junior year) | – | 1 |
| Physical Education (activity course) | ½ | ½ |
| Electives (social science, natural science, or minor) (Prepare for the graduation requirement in U. S. Constitution, American history, institutions, and ideals.) | 3 | 3 |
| *Second Semester* | | |
| Geography 2, Regions (social science credit) | 3 | 3 |
| Music 7A, Music Materials for the Elementary School | 3 | 3 |
| Music 28B, Piano (or the equivalent by examination) | – | 1 |
| Physical Education 53, Physical Education in the Elementary School | 2½ | 2½ |
| Spanish 70, Spanish for Elementary School Teachers (Not required but recommended if no high school Spanish) | 3 | – |
| Speech Arts 1, Voice and Diction | – | 3 |
| Electives (Complete lower division requirements and continue minor) | 1–6 | 1–4 |
| | 29–32 | |

### Junior Year

Students transferring from another curriculum in lower division or from another college or junior college may interchange this semester with semester II of the senior year. (Forty units of upper division work are needed.) The Education Department will probably find it necessary to ask some students who have met all requirements to defer entering practicum until the second semester of the junior year in order to equate class size. Those who defer entering the practicum should use this semester to

1. Complete lower division requirements in art, music, Physical Education 53, natural science, social science and others as needed.
2. Complete minor requirements.
3. Meet requirement for American History and U. S. Constitution.
4. Elect Education 102A or 102B if needed to complete program. Permission to enter these courses must be secured from the instructor.

| | | | |
|---|---|---|---|
| *First Semester* | | | |
| Education 102A, Measurement and Evaluation in Elementary Education or Education 102B, Child Growth and Development | | 3 | 3 |
| Health Education 151, Health Education for Teachers (taken with practicum) | | 2 | 2 |
| Education 147, Education Practicum—Primary Level | | 10 | 10 |
| Reading and Elementary Methods | 3 | | |
| Arithmetic | 3 | | |
| Elementary Music Education | 1 | | |
| Elementary Art Education | 1 | | |
| Language Arts | 2 | | |

Proficiency in use of audio-visual equipment is required by examination. Speific instruction in audio-visual materials is given in each subject matter methods ourse.

| | | *Units for General Elem.* | *Units f Kdg.- Primar* |
|---|---|---|---|
| *Second Semester* | | | |
| Education 102A, Measurement and Evaluation in Elementary Education, or 102B, Child Growth and Development | | 3 | 3 |
| Education 148, Education Practicum—Intermediate Level | | 12 | 8 |
| Elementary Social Studies and Science Ed. | 3 | | |
| Elementary Art Education | 1 | | |
| Elementary Music Education | 1 | | |
| Educational Psychology (learning process, including theory of audio-visual education) | 3 | | |
| Additional 4 units for General Elementary, but not Kindergarten-Primary | | | |
| Currciulum in Elementary Education | 2 | | |
| Directed Teaching | 2 | | |
| Education 116, Student Teaching, primary grades | | - | 3 |

### Senior Year

| | | |
|---|---|---|
| *First Semester* | | |
| Education 116, Directed Teaching | 7 | 4 |
| Education 146, Kindergarten-Primary Practicum (follows Education 148) | - | 4 |
| Education 115A, History and Philosophy of Education (or in second semester) | 2 | 2 |
| Elective | 3 | 3 |
| *Second Semester* (and summer session if needed) | | |
| Elective to complete one minor and to equal total for degree | 16–18 | 16–1 |
| Total | 120 units | |

### Summary

| | | |
|---|---|---|
| Art 6A-6B, 61A | 6 | 6 |
| Educ. 102A, 102B, 115A, 116, 146, 147, 148 | 37 | 37 |
| English | 6 | 6 |
| Speech Arts | - | 3 |
| Health Education 21, 151 | 4 | 4 |
| Physical Education Activities and P.E. 53 | 4 | 4 |
| Music 1A, 7A, 28A-B | 6 | 8 |
| Natural Sciences (including Geog. 1) | 12 | 12 |
| Psychology 1 | 3 | 3 |
| Social Science (including Geog. 2) | 12 | 12 |
| Electives (including minor) | 30 | 25 |
| **Total** | 120 | 120 |

## A.B. DEGREE WITH GENERAL JUNIOR HIGH SCHOOL CREDENTIAL

This credential is granted only in conjunction with a general elementary or a special secondary credential. For information regarding combinations of credentials and for descriptions of majors and minors, refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Teacher Education. Students who intend to work for a general secondary credential or the Master's degree should counsel with the Director of Secondary Education upon application to teacher education.

### Freshman Year

| | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| Biology 1, Survey of Biology (see page 18) | 3 | – |
| English 1, Freshmen Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Geography 1, Elements (natural science credit) and 2, Regions (social science credit) | 3 | 3 |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Physical Science 1A or 1B, Introduction (see page 18) | – | 3 |
| Physical Education (activity courses) | ½ | ½ |
| Electives to meet lower division requirements (see page 17) | 3 | 5 |
| | 14½ | 14½ |

### Sophomore Year

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Psychology 1, General | 3 | – |
| Physical Education (activity courses) | ½ | ½ |
| Speech 2A, Fundamentals of Public Speaking (recommended) | – | 3 |
| Electives (to include preparation for major and minor and completion of lower division requirements) | 12 | 12 |
| | 15½ | 15½ |

### Junior Year

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Education 115B, Secondary Education | 3 | – |
| Education 102C, Growth and Development of the Adolescent | 3 | – |
| Education 102D, Measurement and Evaluation in Secondary Education | – | 2 |
| Education 130, Educational Psychology | – | 2 |
| Health Education 151, Health Education for Teachers (may be taken either semester) | 2 | – |
| Electives, including major and minor | 7 | 11 |
| | 15 | 15 |

### Senior Year

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Education 100B, Methods (in major and minor subjects) | 3 | – |
| Education 115A, History and Philosophy of Education | – | 2 |
| Education 116, Directed Teaching | 3 | 3 |
| Electives, including major and minor | 9 | 10 |
| | 15 | 15 |

### Summary

| | |
|---|---|
| Education 100B, 102C, 102D, 115A, 115B, 116, 130 | 21 |
| English | 6 |
| Health Education 21, 151 | 4 |
| Natural Sciences | 12 |
| Social Sciences | 12 |
| Psychology 1 | 3 |
| Speech Arts 2A | 3 |
| Physical Education | 2 |
| Electives, including teaching major and minor | 57 |
| | 120 |

# CURRICULA LEADING TO THE SPECIAL SECONDARY CREDENTIALS

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN ART

This course leads to the A.B. Degree and to the Special Secondary Credential in Art which entitles the holder to teach art in senior high, junior high, and elementary schools.

### Lower Division

| | *Units* |
|---|---|
| Aesthetics 5, Art Orientation, or 51, Survey of Mexican Art | 2 |
| Aesthetics 50, History and Appreciation of Art | 2 |
| Art A-B, Drawing and Composition | 2–4 |
| Art 6A-6B, Design | 4 |
| Art 14A, Lettering | 2 |
| Art 61A, Crafts in Elementary Schools | 2 |
| Art 61B, Crafts | 2 |
| Electives in Art | 6–8 |
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 6 |
| Health Education 21, Principles of Healthful Living | 2 |
| Natural Sciences (see page 18) | 9–12 |
| Physical Education (activity courses) | 2 |
| Psychology 1, General | 3 |
| Social Sciences (see page 18) | 9–12 |
| Electives, including courses for minor | 7–10 |
| | 60 |

### Upper Division

| | |
|---|---|
| Aesthetics 150, Appreciation and History of Art | 2 |
| Art 106A, Printmaking | 2 |
| Art 112A, Design and Composition | 2 |
| Art 116A, Advanced Painting | 2 |
| Art 119A, Ceramics | 2 |
| Art 194A, Costume Design | 2 |
| Art 195, Design | 2 |
| Electives in upper division art | 5 |
| Speech Arts 140A, Stage Design | 3 |
| Health Education 151, Health Education for Teachers | 2 |
| Education 115B, Secondary Education | 3 |
| Education 102C, Growth and Development of the Adolescent | 3 |
| Education 119, Art in the Elementary School | 2 |
| Education 102D, Measurement in Secondary Education | 2 |
| Education 130, Educational Psychology | 2 |
| Education 100B-A, Methods in Art and in the minor | 3 |
| Education 115A, History and Philosophy of Education | 2 |
| Education 116, Directed Teaching | 6 |
| Electives, including minor | 13 |
| | 60 |

### Summary

| | |
|---|---|
| Aesthetics 50, 150, and 5 or 51 | 6 |
| Art major | 38 |
| Education | 23 |
| English | 6 |
| Health Education 21 and 151 | 4 |
| Natural Sciences | 12 |
| Physical Education | 2 |
| Psychology 1 | 3 |
| Social Sciences | 12 |
| Speech Arts 140A | 3 |
| Electives, including minor | 11 |
| | 120 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN BUSINESS EDUCATION

This course leads to the A.B. Degree and to the Special Secondary Credential in usiness Education, which entitles the holder to teach business subjects in senior igh and junior high schools.

In addition to the following academic requirements, satisfactory evidence of one-alf year, or 1,000 hours of approved experience in the field named in the credential ust be submitted.

Six areas of specialization are possible for the student majoring in Business ducation: *Accounting, Accounting-Secretarial, Management and Supervision, Merhandising, Real Estate and Insurance,* and *Secretarial.*

### Lower Division

| | | Units |
|---|---|---|
| ommerce A, Business Arithmetic | | 1 |
| ommerce 1A-1B, Typewriting (placement examination required before enrollment) | | 6 |
| ommerce 16A-16B, Secretarial Accounting | | 6 |
| ommerce 18A-18B, Commercial Law (should be taken in the junior year) | | |
| usiness Education Subfield Requirements | | 9–15 |
| *Accounting:* Any 9 hours selected from Commerce 20, 21, 24, 25, or 27 | | |
| *Accounting-Secretarial:* Commerce 5A-5B (placement examination required before enrollment. Course may be taken in the junior year) | | |
| *Management and Supervision:* (See Departmental Representative) | | |
| *Real Estate and Insurance:* (See Departmental Representative) | | |
| *Secretarial:* Commerce 5A-5B (placement examination required before enrollment. Course may be taken in the junior year) | | |
| eneral college requirements | | 35–38 |
| English 8, Business English | 3 | |
| English 2, Freshman Literature | 3 | |
| Health Education 21, Principles of Healthful Living | 2 | |
| Psychology 1, General | 3 | |
| Geography 1, Elements (a natural science) | 3 | |
| Geography 10, Economic (a social science) | 3 | |
| Natural Science (in addition to Geography 1) | 6–9 | |
| Economics 1A-1B, Principles | 6 | |
| Social Science (in addition to Geography 10 and Economics 1A-1B) | 0–3 | |
| Speech Arts 2A, Fundamentals | 3 | |
| ectives | | 0–3 |
| | | 60 |

### Upper Division

| | | |
|---|---|---|
| mmerce 103A-103B, Office Management | | 6 |
| usiness Education Subfield Requirements | | 6–10 |
| *Accounting:* Commerce 160A, 164A | | |
| *Accounting-Secretarial:* Either Commerce 160A and 164A or Commerce 113A-138B (if Commerce 5A-5B is taken in the junior year, 113A-113B may be taken in the senior year) | | |
| *Management and Supervision:* (See Departmental Representative) | | |
| *Merchandising:* (See Departmental Representative) | | |
| *Real Estate and Insurance:* Commerce 113A-113B | | |
| lucation requirements | | 26 |
| Health Education 151, Health Education for Teachers | 2 | |
| Education 115B, Secondary Education | 3 | |
| Education 102C, Growth and Development of the Adolescent | 3 | |
| Education 102D, Measurement and Evaluation of Secondary Education | 2 | |
| Education 130, Educational Psychology | 2 | |
| Education 100B-BE, Objectives and Curricula in Business Education | 3 | |
| Education 100B-T, Methods in Typing | 1 | |
| Methods in one of the following subfields: | 2 | |
| Education 100B-A, Accounting Methods | | |
| Education 100B-ME, Merchandising Methods | | |
| Education 100B-S, Shorthand Methods | | |
| Education 115A, History and Philosophy of Education | 2 | |
| Education 116, Directed Teaching | 6 | |
| inor | | 9 |
| ectives | | 7–9 |
| | | 60 |

### Summary

| | *Un* |
|---|---|
| Social Science: Economics 1A-1B, Geography 10, Elective | 12 |
| Natural Science: Geography 1 and electives in natural science | 12 |
| English 8, 2 | 6 |
| Health Education 21, 151 | 4 |
| Physical Education | 2 |
| Psychology 1 | 3 |
| Speech Arts 2A | 3 |
| Commerce: A, 1A-1B, 16A-16B, 18A-18B, 103A-103B | 25 |
| Business Education Subfield (lower division) | 9– |
| Business Education Subfield (upper division) | 6– |
| Education: 100B-BE, 100B-T, 100B (A or ME or S), 102C, 102D, 115A, 115B, 116, 130 | 26 |
| Minor | 9 |
| Electives | 3– |
| | 120 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN MUSI

Students intending to become applicants for this credential must show evider of musical ability before entering the course. They must be able to play artistica upon the piano, music of the grade of the simpler *Songs Without Words* of Mendelsso or else possess a corresponding degree of proficiency in voice or an orchestral instr ment. No credit is given to music majors for the basic courses of Music 1A a Music 7A, but if a deficiency exists in the field of general musicianship, the stude will be required to take either or both of these courses without credit.

All music majors are required to enroll in one musical activity each semest Activities should be included from *both* instrumental and choral groups. In spec cases this requirement may be waived by petition to the Music Department. All s dents are required to pass examinations in applied music in order to recei credit. No credit is allowed to majors in voice or orchestral instruments for any wo in piano which is below the level of artistic hymn playing.

Applicants for the Special Secondary Credential in Music must maintain a gra average of C or better in music courses.

This course leads to the A.B. Degree with a Special Secondary Credential Music which will authorize the holder to teach music in the elementary, junior a senior high schools of the State.

A maximum of 40 units in Music may be used toward the A.B. Degree. Of the 40 units a maximum of 3 may come from the field of musical activities: band, cho chorus, glee clubs and orchestra.

General Language "B" is advised as an elective.

### Lower Division

| | *Un* |
|---|---|
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 6 |
| Social Science (see page 18) | 9– |
| Natural Science (see page 18) | 9– |
| Psychology 1, General | 3 |
| Health Education 21, Principles of Healthful Living | 2 |
| Physical Education (activity courses) | 2 |
| Music 1A, 1B, 1C and 1D, Musicianship | 6 |
| Music 4A-4B, Elementary Harmony | 6 |
| Music 2A, 3A, 6A, Orchestral Instruments | 3 |
| Music 29 or 17, and 18, Applied (must show 4 units in voice and 4 units in piano. May be taken in lower or upper division) | 0– |
| Music 9, 10, 11, 12, 13, 14, 15, 20, 25, 26 or 30, Music Activities | 0– |
| Aesthetics 1A-1B, Survey of Music | 4 |
| Minor (English, social science or natural science recommended as such minor may be completed in whole or in part by requirements as listed above) | 0– |
| | 60 |

### Upper Division

| | *Units* |
|---|---|
| Aesthetics 102A-102B, Music History | 4 |
| Music 105A-105B, Advanced Harmony and Composition | 6 |
| Music 106, Counterpoint | 2 |
| Music 107, Form and Analysis | 2 |
| Music 119A, Instrumental Conducting | 1 |
| Music 120A, Vocal Conducting | 1 |
| Music 121A, Instrumentation | 2 |
| Music 111, 112, 113, 115, 126, or 130, Activities | 3–0 |
| Music 117 or 118, Applied (must show 4 units in voice and 4 units in piano. May be taken in upper or lower division) | 8–0 |
| Minor | 9 |
| Health Education 151, Health Education for Teachers | 2 |
| Education 115B, Secondary Education | 3 |
| Education 102C, Growth and Development of the Adolescent | 3 |
| Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Education 130, Educational Psychology | 2 |
| Education 117A, Elementary Music Education | 2 |
| Education 145, Organization and Administration of Music Education | 2 |
| Education 100B-MU, Methods in Music and methods in the minor subject | 3 |
| Education 115A, History and Philosophy of Education | 2 |
| Education 116, Directed Teaching | 6 |
| | 60 |

### Summary

| | |
|---|---|
| Health Education 21 and 151 | 4 |
| Aesthetics 1A-1B and 102A-102B | 8 |
| Social Science | 9–12 |
| Natural Science | 9–12 |
| English | 6 |
| Psychology | 3 |
| Music 1A, 1B, 1C, 1D, 4A-4B, 2A, 3A, 6A, 29 or 17, 18, 105A-105B, 106, 107, 119A, 120A, 121A, and Music Activities as prescribed by the Department | 40 |
| Education 100B-Mu, 102C, 102D, 115A, 115B, 116, 117A, 130, 145 | 28 |
| Minor | 9–15 |
| Physical Education | 2 |
| Electives | 2–0 |
| | 120 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (MEN)

This course leads to the A.B. Degree and to the Special Secondary Credential Physical Education which entitles the holder to teach physical education in senior hig junior high and elementary schools.

Men majoring in physical education must register for Professional Activities f each semester of the last three years in order to secure adequate skills, methods teaching and proficiency in officiating. Participation in an intercollegiate sport recommended.

### Lower Division

| | | *Uni* |
|---|---|---|
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | | 6 |
| Speech Arts 2A, Fundamentals | | 3 |
| Natural Science (including Biology 1, Survey, or equivalent; Zoology 8, Human Anatomy; Physiology 1A-1C, Human Physiology; and a physical science, if needed). (See Lower Division Requirements for All Curricula, regarding a laboratory course.) | | 9– |
| Social Science | | 9–1 |
| Psychology 1, General | | 3 |
| Health Education 21, Principles of Healthful Living | | 2 |
| Health Education 65, Community Health | | 3 |
| Physical Education: | | |
| 43, 44, Professional Activities | 4 | |
| 51, First Aid and Safety Education | 2 | |
| 53, Phys. Educ. in Elementary Schools | 2 | |
| 72, Introduction to Phys. Educ. | 2 | |
| | | 10 |
| Minor (English, soc. science or natural science recommended as such minor may be completed in whole or in part by requirements as listed above | | 0–6 |
| Electives | | 0–1 |
| | | 60 |

### Upper Division

| | | |
|---|---|---|
| Health Education 151, Health Education for Teachers | | 2 |
| Education 115B, Secondary Education | | 2 |
| Education 102C, Growth and Development of the Adolescent | | 3 |
| Education 102D, Measurement and Evaluation in Secondary Education | | 2 |
| Education 130, Educational Psychology | | 2 |
| Education 100B-PE, Methods in Physical Education (Men) and methods in the minor subject | | 3 |
| Education 115A, History and Philosophy of Education | | 2 |
| Education 116, Directed Teaching | | 6 |
| Zoology 165, Human Heredity | | 2 |
| Physical Education: | | |
| 145, 146, 147, 148, Professional Activities | 8 | |
| 155, Applied Anatomy and Kinesiology | 3 | |
| 168, Physiology of Exercise | 3 | |
| 170, Recreational Leadership | 3 | |
| 177, Ind. Program Adaptation | 3 | |
| 190, Adm. of Phys. Ed. in Secondary Schools | 3 | |
| 199, Special Study in Health, Recreation or Phys. Ed.—Recommended | 2–3 | |
| | | 25–2 |
| Minor | | 9 |
| Electives | | 1–4 |
| | | 60 |

### Summary

| | *Units* |
|---|---|
| nglish 1 and 2 | 6 |
| peech Arts 2A | 3 |
| atural Science | 9–12 |
| ocial Science | 9–12 |
| sychology 1 | 3 |
| ealth Education 21, 65, 151 | 7 |
| hysical Education 43, 44, 51, 53, 72, 145, 146, 147, 148, 155, 168, 170, 177, 190, 199 | 40 |
| ducation 100B-PE, 102C, 102D, 115A, 115B, 116, 130 | 20 |
| oology 165 | 2 |
| inor | 15 |
| lectives | 0–12 |
| | 120 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (WOMEN)

This course leads to the A.B. Degree and to the Special Secondary Credential in hysical Education which entitles the holder to teach physical education in senior igh, junior high, and elementary schools.

### Lower Division

| | *Units* |
|---|---|
| ocial Science | 9–12 |
| atural Science (including Biology 1, Survey, or equivalent; Zoology 8, Human Anatomy; Physiology 1A-1C, Human Physiology; and a physical science, if needed.) (See Lower Division Requirements for All Curricula, regarding a laboratory course.) | 9–12 |
| nglish 1, Freshman Composition, and 2, Freshman Literature or optional course | 6 |
| sychology 1, General | 3 |
| ealth Education 21, Principles of Healthful Living | 2 |
| peech Arts 2A, Fundamentals of Public Speaking | 3 |
| hysical Education: | |
| 1A, Fundamental Skills | ½ |
| 2A, Folk Dancing | ½ |
| 3A-3B, Modern Dance | 1 |
| 4, Fieldball, Soccer, and Speedball | ½ |
| 5, Softball, Volleyball, and Hockey | ½ |
| 6, Basketball | ½ |
| 11A, Ballroom Dancing | ½ |
| 12A-12B, Advanced Modern Dance | 2 |
| 13A, Archery | ½ |
| 14A, Badminton | ½ |
| 18A, Tennis | ½ |
| 21, Life Saving | ½ |
| 51, First Aid and Safety Education | 2 |
| 53, Physical Education in the Elementary School | 2 |
| 72, Introduction to Physical Education | 2 |
| inor | 6 |
| lectives (Recommended electives: Art 61B, Health Education 90, Health Education 65, Home Economics 61A-61B, Music 1A) | 2–8 |
| | 60 |

### Upper Division

| Physical Education: | Unit |
|---|---|
| 155, Applied Anatomy and Kinesiology | 3 |
| 156A-156B, Sports Methods | 4 |
| 160, Teaching of Body Mechanics | 2 |
| 161, Folk Dancing Materials and Advanced Techniques | 2 |
| 164A-164B, Methods in Modern Dance | 4 |
| 168, Physiology of Exercise | 3 |
| 170, Recreational Leadership | 3 |
| 177, Individual Program Adaptations | 3 |
| 185, Techniques of Individual Sports | 1 |
| 190, Administration of Physical Education in Secondary Schools | 3 |
| Health Education 151, Health Education for Teachers | 2 |
| Education: | |
| 115B, Secondary Education | 3 |
| 102C, Growth and Development of the Adolescent | 3 |
| 102D, Measurement and Evaluation in Secondary Education | 2 |
| 130, Educational Psychology | 2 |
| 100B-PE, Methods in Physical Education (Women) and methods in the minor subject | 3 |
| 115A, History and Philosophy of Education | 2 |
| 116, Directed Teaching | 6 |
| Minor | 9 |
| | 60 |

### Summary

| | |
|---|---|
| Education 115B, 102C, 102D, 130, 100B-PE, 115A, 116 | 21 |
| English 1 and 2 | 6 |
| Health Education 21, 151 | 4 |
| Natural Science | 9–1 |
| Physical Education | 42 |
| Psychology 1 | 3 |
| Social Science | 9–1 |
| Speech Arts 2A | 3 |
| Minor | 15 |
| Electives | 0–6 |
| | 120 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN SPEECH ARTS

The following program when satisfactorily completed will lead to the A.B Degree with Special Secondary Credential in Speech Arts.

### Lower Division

| | Unit |
|---|---|
| Social Science | 9–1 |
| Natural Science | 9–1 |
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 6 |
| Psychology 1, General | 3 |
| Health Education 21, Principles of Healthful Living | 2 |
| Physical Education (activity courses) | 2 |
| Speech Arts 2A, 2B, 11A, 11B, 60A, 60B, 81 | 6 |
| Speech Arts 55A-55B or 56A-56B or 55A-56A or 55A-56B or 82, 83 | 6 |
| Speech Arts 1, 61A,B,C,D, or 81 | 3 |
| Speech Arts electives | 5 |
| Minor | 6 |
| Electives | 0–3 |
| | 60 |

### Upper Division

| | *Units* |
|---|---|
| peech Arts 150 and 176 or 179A | 6 |
| peech Arts electives, selected from Speech Arts 108, 140A, 155, 159A, 161, 182, 191, 192A or 192B | 6 |
| peech Arts electives | 6 |
| pper Division electives selected from upper division English Literature | 6 |
| inor | 9 |
| ealth Education 151, Health Education for Teachers | 2 |
| ducation: | |
| 115B, Secondary Education | 3 |
| 102C, Growth and Development of the Adolescent | 3 |
| 102D, Measurement and Evaluation in Secondary Education | 2 |
| 130, Educational Psychology | 2 |
| 100B-SA, Methods in Speech Arts and methods in the minor subject | 3 |
| 115A, History and Philosophy of Education | 2 |
| 116, Directed Teaching | 6 |
| lectives | 4 |
| | 60 |

### Summary

| | |
|---|---|
| ocial Science | 9–12 |
| atural Science | 9–12 |
| nglish 1 and 2 | 6 |
| sychology 1 | 3 |
| ealth Education 21 and 151 | 4 |
| hysical Education | 2 |
| peech Arts, major | 38 |
| pper division English Literature | 6 |
| ducation 100B-SA, 102C, 102D, 115A, 115B, 116, 130 | 21 |
| inor | 15 |
| lectives | 0–6 |
| | 120 |

## HEALTH AND DEVELOPMENTAL CREDENTIAL

Requirements for this credential include:

1. Possession of a valid license issued by the official California state board or gency in charge of his profession in California.

2. Two years of successful experience in the special service to be named in the redential, except for the school nurse.

3. For school nurse only: the completion of six semester hours of work, includ- g courses in:

A. Educational Psychology (Education 130)
B. Administration of the School Health Program (Health Education 153)
C. Social case work, or rural education or child hygiene.

Pattern to be approved by adviser appointed by the Dean of Education.

## SPECIAL SECONDARY CREDENTIAL IN CORRECTION OF SPEECH DEFECTS

This credential is granted only to students who can verify two years of successf teaching experience or four semester hours of superior student teaching completed an approved teacher education institution and who hold a valid California teache certificate, credential, or life diploma of elementary or secondary school grade. Su students must show credit in the following subjects:

### Lower Division

| | *Uni* |
|---|---|
| Psychology 1, General | 3 |
| Speech Arts 2A, Fundamentals of Public Speaking, or equivalent | 3 |
| Speech Arts 11A or 11B, Interpretation | 3 |
| Speech Arts electives | 6 |

### Upper Division

| | |
|---|---|
| Speech Arts 150, Phonetics | 3 |
| Speech Arts 221, Articulatory Problems of Speech or Education 176, Problems of Speech Correction and Articulation | 3 |
| Speech Arts 179A-179B or Education 179A-179B, Nervous Speech Disorders | 6 |
| Psychology 131, Psychological Foundations of Personality | 2 |

## SPECIAL SECONDARY CREDENTIAL FOR TEACHING THE MENTALLY RETARDED CHILD

An applicant for the special secondary credential for teaching the mentall retarded child must have completed the following requirements:

1. A four year college course with a bachelor's degree.

2. Possession of a valid general elementary credential.

3. As part of, or in addition to, the courses taken for the general elementar credential, the applicant must have completed 18 semester units of professional trainin distributed approximately as follows and approved by the credential adviser:

   A. Six units selected from the following: Education 102B or Educatio 102C; Psychology 12, Psychology 131 or 132; Psychology 150 or 15
   B. Nine units selected from the following: Art 61A or 161A; Educatio 181, Education 182, and Education 183; and Education 232.
   C. Three units of Education 116 (directed teaching of the mentall retarded).

4. The 18-unit requirement will be reduced 4 units for each year of verifie successful experience in teaching special classes for mentally retarded children, th total not to exceed 12 units.

5. At least 6 semester units of the 18 required must have been completed withi 5 years of the time application is made for the credential.

6. Twelve units of work must have been completed at this college.

## SCHOOL PSYCHOMETRIST CREDENTIAL

An applicant for the school psychometrist credential must have completed th following requirements:

1. Possession of a California general teaching credential (General Elementar Junior High School, or General Secondary) or a four-year college course with bachelor's degree.

2. As a part of the undergraduate or graduate program the applicant must hav completed 18 semester units of training distributed approximately as follows an approved by the credential adviser:

   A. Six units selected from the following: Education 102A or Educatio 102D; Education 102B or Education 102C; and Education 130.
   B. Six units as follows: Education 181 and Psychology 151.
   C. Six units as follows: Psychology 105A and Psychology 105B.

# CURRICULA LEADING TO THE GENERAL SECONDARY SCHOOL CREDENTIAL

## INFORMATION CONCERNING THE GENERAL SECONDARY SCHOOL CREDENTIAL

A candidate for this credential must complete the requirements for the bachelor's degree from an accredited institution with a major and a minor commonly taught in the secondary schools of California. Admission to candidacy for this credential should be sought during the second semester of the sophomore year or upon admission to San Diego State College with advanced or graduate status. For admission requirements, refer to the section entitled: Admission to Teacher Education.

Students desiring a major in art, business education, music, physical education or speech arts should complete the requirements for the Special Secondary Credential in the respective area desired, then continue with the graduate program. For further details regarding these majors, refer to the section entitled: Majors and Minors for the General Secondary Credential.

Students desiring one of the other areas as a major for which San Diego State College is authorized should complete a program leading to the A.B. Degree at the end of four years and the General Secondary Credential upon completion of the graduate year requirements outlined on the following pages. For a list of majors and minors, refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Teacher Education.

Any person desiring this credential should consult with the Director of Secondary Education during his first semester of attendance at San Diego State College.

## RECOMMENDED PROGRAM FOR THE GENERAL SECONDARY SCHOOL CREDENTIAL

The following courses should be completed before receiving the bachelor's degree (in the order listed):

| | *Units* |
|---|---|
| Education 115B, Principles of Secondary Education | 3 |
| Education 102C, Growth and Development of the Adolescent | 3 |
| Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Education 130, Educational Psychology | 2 |
| Health Education 151, Health Education for Teachers | 2 |

The graduate work must consist of a minimum of 24 semester units of upper division or graduate work including the following specific requirements:

1. At least 12 semester units must be completed at San Diego State College.
2. At least one course of graduate level work (200 number) in the major field.
3. Enough units to complete a 21 semester unit minor. Refer to the section entitled: Majors and Minors for the General Secondary Credential.
4. Professional Education—completion of the courses listed above and the following:

| | |
|---|---|
| Education 100B, Methods of Teaching (in the major and minor subjects) (available Fall Semester only) | 3 |
| Education 115A, History and Philosophy of Education | 2 |
| Education 201, Curricular Problems of the Secondary School | 3 |
| Education 202, Guidance Problems of the Secondary School | 3 |
| Education 316, Directed Teaching (or equivalent) | 6 |

## MAJORS AND MINORS FOR THE GENERAL SECONDARY CREDENTIAL

The following pages outline tentative programs for the majors and minors for which San Diego State College is authorized to recommend for the General Secondary Credential.

### Major in Art

The requirements for the A.B. Degree and the Special Secondary Credential in Art should be completed simultaneously. (Students transferring from another institution with the A.B. Degree and a major in art should consult with the departmental representative for special program planning.) Refer to the section entitled: A.B. Degree with Special Secondary Credential in Art. After the above requirements have been met, and the candidate has been accepted by the art staff for graduate work in art, the candidate for the General Secondary Credential shall complete a graduate year including the following courses in his major:

| *Graduate Year* | *Units* |
|---|---|
| Art 200A-200B, Special Problems in Art | 4 |

### Minor in Art

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Art A-B, Drawing and Composition | 2–4 |
| Art 6A-6B, Design | 4 |
| Art elective (Art 14A, Lettering, recommended) | 0–2 |
| Aesthetics 50, Appreciation and History of Art | 2 |
| Aesthetics 5, Art Orientation, or Art 51, Survey of Mexican Art | 2 |

*Upper Division*

| | |
|---|---|
| Upper division electives in Art | 9 |
| Aesthetics 150, Appreciation and History of Art | 2 |

### Major in Business Education

The requirements for the A.B. Degree and the Special Secondary Credential in Business Education must be completed simultaneously. Refer to the section entitled: A.B. Degree with Special Secondary Credential in Business Education. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year including the following courses in his major:

*Graduate Year*

Select four units from the following:

| | |
|---|---|
| Commerce 203, Secretarial Administration | 2 |
| Commerce 213, Problems in Business Education | 2 |
| Commerce 223, Problems in Merchandising | 2 |
| Commerce 233, Administration and Supervision of Business Education | 2 |
| Commerce 260, Advanced Problem Analysis (Accounting) | 2 |

### Minor in Business Education

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

This minor is not approved as part of the requirements for the A.B. Degree unless the degree and a credential are awarded simultaneously. It is recommended as a second minor area only.

*Lower Division*

| | |
|---|---|
| Commerce 14A-14B, Principles of Accounting | 6 |
| Economics 1A-1B, Principles of Economics | 6 |

*Upper Division*

| | |
|---|---|
| Upper division commerce courses selected with approval of the departmental representative | 9 |

### Major in Chemistry

*Lower Division*

| | *Units* |
|---|---|
| Chemistry 1A-1B, General | 10 |
| Chemistry 5, Quantitative Analysis | 3 |
| Mathematics 7A-7B, Mathematical Analysis, or 3A-3B, Plane Analytic Geometry and First Course in Calculus, and 4A-4B, Second and Third Course in Calculus | 6–12 |
| Physics 2A-2B, General, and 3A-3B, Physcial Measurements (or 1A-1B-1C-1D, or 4A-4B-4C, Principles) | 8–12 |

*Upper Division*

| | |
|---|---|
| Chemistry 101, 102, 103, Organic Chemistry | 10 |
| Chemistry 105, Advanced Quantitative Analysis | 3 |
| Chemistry 110A-110B, Physical Chemistry | 6 |
| Electives in upper division chemistry, or electives in a related field approved by the departmental representative | 5 |

*Graduate Year*

| | |
|---|---|
| Chemistry 200, Seminars | 4 |

### Minor in Chemistry

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Chemistry 1A-1B, General | 10 |
| Chemistry 5, Quantitative Analysis | 3 |
| Physics 2A-2B, General, and 3A-3B, Physical Measurements (or 1A-1B-1C-1D, or 4A-4B-4C, Principles) | 8–12 |

*Upper Division*

| | |
|---|---|
| Chemistry 101, Organic | 4 |
| Electives in upper division chemistry selected with approval of departmental representative | 5 |

### Major in Economics

*Lower Division*

| | |
|---|---|
| Economics 1A-1B, Principles of Economics | 6 |
| Lower division year course in history, political science or sociology | 6 |

*Upper Division*

| | |
|---|---|
| Economics 100A-100B, Modern Economic Thought | 6 |
| Economics electives, including a maximum of 6 units in a related field approved by the departmental representative | 18 |

*Graduate Year*

| | |
|---|---|
| Economics 200A-200B, Seminar in Modern Economic Thought | 4 |

### Minor in Economics

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Economics 1A-1B, Principles of Economics | 6 |
| A year course in another social science area | 6 |

*Upper Division*

| | |
|---|---|
| Economics 100A, Modern Economic Thought | 3 |
| Upper division economics courses selected under the supervision of the departmental representative | 6 |

### Major in English

| | Unit |
|---|---|
| *Lower Division* | |
| English 1, Freshman Composition | 3 |
| English 6A-6B, The Study of Literature | 6 |
| English 56A-56B, Survey of English Literature or 60A-60B, Literature and Personality | 6 |
| *Upper Division* | |
| Upper Division English courses selected under the supervision of the departmental representative | 24 |
| *Graduate Year* | |
| One of the following seminars | 2 |
| English 201, Shakespeare<br>English 202, Mark Twain<br>English 221, Regionalism in American Literature<br>English 222, Utopias | |
| English 192, The English Language (if not taken as an undergraduate) or 191, 195, or an additional seminar from the foregoing list | 2–3 |

### Minor in English

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| Lower division English courses to be selected under supervision of departmental representative | 12 |
| *Upper Division* | |
| Upper division English courses to be selected under the supervision of the departmental representative | 9 |

### Minor in French

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| French A, B, C, D or equivalent | 15–16 |
| History 4A-4B, History of Modern Europe, or equivalent | 6 |
| *Upper Division* | |
| French 101A-101B, Conversation and Composition | 6 |
| French Literature (select one course) | 3 |

### Minor in Health Education for Men or Women

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

Students majoring in physical education may use this only as a second minor. Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | |
|---|---|
| *Lower Division* | |
| Physical Education 51, First Aid and Safety Education | 2 |
| Home Arts 61A, Nutrition | 2 |
| Health Education 65, Community Health | 3 |
| *Upper Division* | |
| Health Education 152, Health Education Programs | 3 |
| Health Education 153, Administration of School Health Program | 3 |
| Health Education 199, Special Study in Health | 1–3 |

### Major in History

| | |
|---|---|
| *Lower Division* | |
| History 4A-4B, History of Modern Europe, or 8A-8B, History of the Americas, or 9A-9B, History of the Pacific Ocean Area | 6 |
| Political Science 1A-1B, Comparative Government, or Political Science 71A-71B, American Government and Politics, or Economics 1A-1B, Principles | 6 |

Two of the above history courses are recommended for students planning to major in history, and it is suggested that History 4A-4B be included as one of the courses.

| *Upper Division* | *Units* |
|---|---|
| History 199, Special Course for Advanced Students | 2 |
| United States History course | 3–6 |
| Select from three of the following areas with approval of departmental representative | 16–19 |
| 1. Ancient and Medieval | |
| 2. Modern European | |
| 3. Latin America | |
| 4. Pacific Area and Far East | |
| *Graduate Year* | |
| History 270A-270B, Seminar | 2–2 |

### Minor in History

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed. A year course in United States History must be included.

| *Lower Division* | |
|---|---|
| History 4A-4B, History of Modern Europe, or 8A-8B, History of the Americas, or 9A-9B, History of the Pacific Ocean Area | 6 |
| Electives chosen from anthropology, economics, geography (except Geography 1, 3, 4), political science, sociology | 6 |
| *Upper Division* | |
| Upper Division History selected with approved of departmental representative | 9 |

### Minor in Home Economics

A minimum of 21 semester units, of which at least 9 units shall be upper division, must be completed. Candidates selecting this minor must have their programs approved by the departmental representative.

| *Lower Division* | |
|---|---|
| Home Economics 5, Food Preparation | 3 |
| Home Economics 11, Clothing Design | 3 |
| Electives in Home Economics | 0–3 |
| *Upper Division* | |
| Home Economics 101, Clothing Selection | 3 |
| Home Economics 105, Family Meals | 3 |
| Home Economics 150, Home Management | 3 |
| Home Economics 170, Child Care and Development | 3 |
| Electives in Home Economics | 0–3 |

### Minor in Industrial Arts

A minimum of 21 semester units, of which at least 9 shall be upper division courses, must be completed. The candidate must demonstrate competence in mechanical drawing. All candidates selecting this minor must have their programs approved by the departmental representative.

| *Lower Division* | | |
|---|---|---|
| Industrial Arts 2, Mechanical Drawing | | 2 |
| Select at least two courses from the following: | | 6 |
| Industrial Arts 41, Elements of Metalworking | 3 | |
| Industrial Arts 51, Elements of Woodworking | 3 | |
| Industrial Arts 61, Elements of Electricity | 3 | |
| *Upper Division* | | |
| Industrial Arts 121, Advanced Mechanical Drawing | | 3 |
| Select at least two courses from the following: | | 4 |
| Industrial Arts 141, Advanced Metalworking | 2 | |
| Industrial Arts 151A, Furniture Making | 2 | |
| Industrial Arts 161, Advanced Applied Electricity | 2 | |
| Electives from Industrial Arts courses selected with approval of departmental representative to complete requirement | | 6–8 |

### Major in Life Science

Un

*Lower Division*

Zoology 1A-1B, General 8
Botany 2A-2B, General 8
Zoology 20, Human Anatomy and Physiology 3
Chemistry 1A-1B, General, or 2A-2B, Fundamentals 6–
Physics 2A-2B, General, and 3A-3B, Physical Measurements 8
Geology 1A, Physical, and Astronomy 1, Descriptive, recommended.

*Upper Division*

Upper division Zoology and Botany, of which 6 units may be from a related field with the approval of the departmental representative 24

*Graduate Year*

Zoology 200, Seminar 2
Zoology 202, Hydrobiology, or Zoology 213, Advanced Studies in Ornithology 2

### Minor in Life Science

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

Biology 10A-10B, General Biology, or Zoology 1A-1B, General Zoology 6–
Botany 2A-2B, General Botany 8
Chemistry 1A, General, or 2A-2B, Fundamentals 5–

*Upper Division*

Upper division courses in Zoology and Botany to be selected with approval of the departmental representative 9

### Major in Mathematics

*Lower Division*

Mathematics 3A, Plane Analytical Geometry 3
Mathematics 3B, First Course in Calculus 3
Mathematics 4A, Second Course in Calculus 3
Additional mathematics or work in related areas 3

*Courses in related areas:* Astronomy 1, Descriptive Astronomy; Commerce 2, Mathematics of Finance; Engineering 1A, Plane Surveying; Engineering 21, Descriptive Geometry; Physics 1A or 4A, Mechanics of Solids; Physics 2A, General.

*Upper Division*

At least one course in Algebra (Mathematics 102 or 111) 3
At least one course in Geometry (Mathematics 101, 105, 106) 3
History of Mathematics (Mathematics 104) 3
Third Course in Calculus (Unless Mathematics 4B in lower division) (Mathematics 117) 3
Probability and Statistics (Mathematics 140) 3
Additional upper division units, 6 of which may be in related areas 9

*Graduate Year*

Four units selected from the following:
Mathematics 201, Secondary Geometry from an Advanced Point of View 2
Mathematics 202, Secondary Algebra from an Advanced Point of View 2
Mathematics 206, History of Mathematics 2

### Minor in Mathematics

A minimum of 21 semester units, of which at least 9 units shall be upper divisio or graduate courses, must be completed.

*Lower Division*

**Pattern I**

Mathematics 7A-7B, Elementary Mathematical Analysis 6
Two courses selected from courses in related areas 6
(See above under teaching major in mathematics)

**or Pattern II**

| | *Units* |
|---|---|
| Mathematics D, Trigonometry (or high school equivalent for which pattern credit may be allowed) | 3 |
| Mathematics 3A, Plane Analytic Geometry | 3 |
| Mathematics 3B, First Course in Calculus | 3 |
| One course selected from courses in related areas (See above under teaching major in mathematics) | 3 |

*Upper Division*

| | |
|---|---|
| Upper division units in mathematics selected with the approval of the departmental representative | 9 |

One course in each of the areas, algebra, geometry, and history of mathematics, is desirable.

### Major in Music

The requirements for the A.B. Degree and the Special Secondary Credential in Music should be completed simultaneously. Students transferring from another institution with the A.B. degree and a major in Music should consult with the departmental representative for special program planning. Refer to page 33 for the recommended program for the Special Secondary Credential in Music. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year including 4 units selected from the following courses in his major:

*Graduate Year*

Four units selected from the following:

| | |
|---|---|
| Music 200A-200B, Special Problems in Music | 2–2 |
| Music 203, Musicology | 2 |
| Music 206, Composition | 2 |

### Minor in Music

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Music 1A or equivalent, and 1B, Musicianship | 2–5 |
| Music 4A-4B, Elementary Harmony | 6 |
| Aesthetics 1A-1B, Survey of Music | 4 |
| Music activities selected from Music 11, 12, 13, 15, 20, 26, 30 | 0–2 |

*Upper Division*

Select 9 units with approval of departmental representative from:

| | |
|---|---|
| Aesthetics 102A-102B, Music History | 4 |
| Aesthetics 100, Great Music | 3 |
| Music 105A-105B, Advanced Harmony and Composition | 6 |
| Music 106, Counterpoint | 2 |
| Music 107, Form and Analysis | 2 |
| Music 119A, Instrumental Conducting | 1 |
| Music 120A, Vocal Conducting | 1 |
| Music 121A-121B, Instrumentation and Arranging | 4 |
| Music 117A-117B, Advanced Individual Study of Voice | 2 |
| Music 118A-118B, Advanced Individual Study of Piano or Organ | 2 |

### Major in Physical Education for Men

The requirements for the A.B. Degree and the Special Secondary Credential in Physical Education must be completed simultaneously. Refer to page 35 for the recommended program for the Special Secondary Credential in Physical Education. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year including the following courses in his major:

Select two courses from the following:

| | |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |

### Minor in Physical Education for Men

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | Units |
|---|---|
| *Lower Division* | |
| Physical Education 51, First Aid and Safety Education | 2 |
| Physical Education 53, Physical Education in the Elementary Schools | 2 |
| Physical Education 72, Introduction | 2 |
| *Upper Division* | |
| Professional Activity courses selected with approval of departmental representative | 4 |
| Physical Education 190, Administration of Physical Education in Secondary Schools | 3 |
| Physical Education 170, Recreational Leadership | 2 |

### Major in Physical Education for Women

The requirements for the A.B. Degree and the Special Secondary Credential in Physical Education must be completed simultaneously. Refer to page 36 for the recommended program for the Special Secondary Credential in Physical Education. After the above requirements have beeen met, the candidate for the General Secondary Credential shall complete a fifth year (refer to page 25) including the following courses in his major:

*Graduate Year*

Select two courses from the following:

| | |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education, and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |

### Minor in Physical Education for Women

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | |
|---|---|
| *Lower Division* | |
| Physical Education 1A, Fundamental Skills | ½ |
| Physical Education 1B, Folk Dancing | ½ |
| Physical Education 1C, Rhythmic Skills | ½ |
| Physical Education 1D, Team Sports | ½ |
| Physical Education 53, Physical Education in Elementary Schools | 2½ |
| Physical Education electives | 1½ |
| *Upper Division* | |
| Physical Education 156A-156B, Sports Methods | 4 |
| Physical Education 161, Folk Dancing Materials and Advanced Techniques | 2 |
| Electives selected from Physical Education 153, 170, 164A-164B | 3 |

### Major in Physical Sciences

This teaching major may be used as a major for the A.B. Degree if the lower and upper division requirements listed below are completed and the student has been admitted to candidacy for the General Secondary Credential and has completed at least nine units of professional courses in education by the date of degree candidacy.

*Lower Division*

| | *Units* |
|---|---|
| Chemistry 1A-1B, General Chemistry | 10 |
| Physics 1A-1B-1C-1D or 4A-4B-4C, Principles (or 2A-2B, General, and 3A-3B, Physical Measurements) | 8–12 |
| Mathematics 3A, Plane Analytic Geometry, 3B, First Course in Calculus, 4A, Second Course in Calculus (recommended 4B, Third Course in Calculus) | 9–12 |
| Biology 1, Survey | 3 |

*Upper Division*

| | |
|---|---|
| Twenty-four units in chemistry and physics, with a minimum of 9 units in each of these two departments. Six units may be selected from related fields with approval of the departmental representative | 24 |

*Graduate Year*

Select 4 units from the following:

| | |
|---|---|
| Chemistry 200, Seminar | 2–4 |
| Physics 200, Seminar | 2–4 |

**ajor in Physics**

*Lower Division*

| | |
|---|---|
| Physics 1A-1B-1C-1D or 4A-4B-4C, Principles, or equivalent | 12 |
| Chemistry 1A-1B, General | 10 |
| Mathematics 3A-3B, Plane Analytic Geometry and First Course in Calculus | 6 |
| Mathematics 4A-4B, Second and Third Course in Calculus | 6 |

*Upper Division*

| | |
|---|---|
| Physics 105A-B, Analytical Mechanics | 6 |
| Physics 110A, Principles of Electrostatics and Electromagnetism | 3 |
| Physics 102, Electronics, or 110B, Electromagnetism | 3 |
| Electives from upper division physics, with a maximum of 6 units selected from related areas upon approval of departmental representative | 12 |

*Graduate Year*

Select 4 units from the following:

| | |
|---|---|
| Physics 200, Seminars (both semesters) | 2–2 |

**inor in Physics**

A minimum of 21 semester units, of which at least 9 units shall be upper vision or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Physics 1A-1B-1C-1D or 4A-4B-4C, Principles, or equivalent | 12 |
| Chemistry 1A-1B, General | 10 |
| Mathematics 3A, Plane Analytic Geometry, 3B, First Course in Calculus, 4A-4B, Second and Third Course in Calculus | 12 |

*Upper Division*

| | |
|---|---|
| Upper division courses to be selected with approval of departmental representative | 9 |

**ajor in Psychology**

This major can be used for a General Secondary Credential only if the candidate mpletes *two* teaching minors.

*wer Division*

| | |
|---|---|
| Psychology 1, General | 3 |
| Psychology 10, Advanced General | 3 |
| Psychology 11, Applied, or 12, Mental Hygiene | 3 |

| *Upper Division* | *Un* |
|---|---|
| Psychology 104A, Statistical Methods | 3 |
| Psychology 105B, Psychological Testing (Individual) | 3 |
| Psychology 131, Psychological Foundations of Personality | 2 |
| Psychology 132, Problems of Personality Adjustment | 2 |
| Psychology 151, Introduction to Clinical Appraisal | 3 |
| Psychology 160A, Experimental Psychology | 3 |
| Electives to be selected with approval of the departmental representative | 8 |
| *Graduate Year* | |
| Psychology 200, Seminar in Psychology | 2 |
| Education 230, Guidance Problems in the Secondary School | 3 |

### Minor in Recreation for Men or Women

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

Students majoring in Physical Education may use this only as a second minor. Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | |
|---|---|
| *Lower Division* | |
| Physical Education 51, First Aid and Safety Education | 2 |
| Physical Education 53, Physical Education in Elementary Schools | 2 |
| Electives selected from Art 61B, Crafts, or from the fields of dance, drama or music | 2 |
| *Upper Division* | |
| Physical Education 165, Administration of Community Recreation | 3 |
| Physical Education 170, Recreational Leadership | 3 |
| Physical Education 199, Special Study in Physical Education or Recreation | 1– |

### Major in Romance Languages

| | |
|---|---|
| *Lower Division* | |
| Spanish A-B, C-D, or the equivalent | 16 |
| French A-B, C-D, or the equivalent | 16 |
| History 4A-4B, or 8A-8B | 6 |
| *Upper Division* | |
| Spanish 101A-101B, Conversation and Composition | 6 |
| French 101A-101B, Conversation and Composition | 6 |
| Spanish 199 of French 199, Comprehensive Reading and Survey Course | 3 |
| Courses in Spanish literature, French literature or Spanish-American litature, selected with the approval of the departmental representative | 9 |
| *Graduate Year* | |
| Spanish 201, Old Spanish | 2 |
| Spanish 202, Seminar in Spanish-American Literature | 2 |

### Major in Social Sciences

This teaching major may be used as a major for the A.B. Degree if the lower and upper division requirements listed below are completed and the student has been admitted to candidacy for the General Secondary Credential and has completed at least 9 units of professional courses in education by the date of degree candidacy.

*Lower Division*

A student must complete a minimum of 6 units in each of at least 3 fields he may select from the departments named below:

Economics
Geography
History
Political Science
Sociology and/or anthropology

*Upper Division*

A student must complete a minimum of 30 units with the approval of the departmental representative as follows:

| | Units |
|---|---|
| 1. A minimum of 12 units from any field named above | 12 |
| 2. A minimum of 6 units from each of two fields named above, excluding the field selected for the major upper division concentration | 12 |
| 3. Electives from social science fields | 6 |

*Graduate Year*

| | |
|---|---|
| Post-bachelor work selected with approval of the departmental representative | 4 |

### Major in Spanish

*Lower Division*

| | |
|---|---|
| Spanish A-B, C-D, or the equivalent | 16 |
| French A-B, or German A-B, or Latin A-B | 10 |
| History 4A-4B, or 8A-8B | 6 |

*Upper Division*

| | |
|---|---|
| Spanish 101A-101B, Conversation and Composition | 6 |
| Spanish 199, Comprehensive Reading and Survey | 3 |
| Upper division courses in Spanish or Spanish-American literature with a maximum of 6 units which may be selected from related fields with the approval of the departmental representative | 9–15 |

*Graduate Year*

| | |
|---|---|
| Spanish 201, Old Spanish | 2 |
| Spanish 202, Seminar in Spanish-American Literature | 2 |

### Minor in Spanish

A minimum of 21 semester units, of which at least 9 units be upper division r graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Spanish, A, B, C, D or equivalent | 15–16 |
| History 4A-4B, History of Modern Europe, or 8A-8B, History of the Americas, or equivalent | 6 |

*Upper Division*

| | |
|---|---|
| Spanish 101A-101B, Conversation and Composition | 6 |
| Spanish Literature (select one course) | 3 |

### Major in Speech Arts

*Lower Division*

| | |
|---|---|
| Speech Arts 1, Voice and Diction, or 2A, Fundamentals of Public Speaking, or 2B, Extemporaneous Speaking, or 11A, Interpretation | 3 |
| Speech Arts 55A-55B, Elementary Acting, or 81, Survey of Radio, and 82, Radio Announcing, or 83, Radio Acting and Directing | 6 |

*Upper Division*

| | |
|---|---|
| Speech Arts 150, Phonetics | 3 |
| Speech Arts 154A-154B, History of the Theatre, or 155, Advanced Acting, and any first semester upper division course, or 140A-140B, Stage Design, or 179A-179B, Nervous Speech Disorders, or 192A-192B, Advanced Public Speaking | 6 |
| Speech Arts 179A-179B, Nervous Speech Disorders, or 159A-159B, Stage Direction, or two courses selected from the following: 181, Radio Sales and Advertising, 182, Advanced Radio Production, 183, Radio News Writing and Broadcasting, 184, Radio Writing, or 191, Organized Discussion | 6 |
| Speech Arts 108, Advanced Interpretation, or 118A or 118B, playwriting, or 145, Stage Lighting, or 152, Stage Costume, or 154A or 154B, History of the Theatre, or 162, Advanced Argumentation, or 176, Problems of Speech Correction and Articulation | 3 |
| A maximum of 6 units may be selected from related fields with approval of departmental representative | 0-6 |

*Graduate Year*

| Select four units from the following courses: | Un |
|---|---|
| Speech Arts 260, Seminar in Interpretation | 2 |
| Speech Arts 221, Seminar in Articulatory Problems in Speech | 2 |
| Speech Arts 245, Seminar in Technical Practice | 2 |
| Speech Arts 259, Seminar in Stage Direction | 2 |
| Speech Arts 200, Seminar in History of Oratory | 2 |

## Minor in Speech Arts

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

*Lower Division*

| | |
|---|---|
| Speech Arts 2A-2B, Fundamentals of Public Speaking and Extemporaneous Speaking; or 55A-55B, Elementary Acting; or 56A-56B, Dramatic Production; or 55A, Elementary Acting, and 2A, Fundamentals of Public Speaking, or 2B, Extemporaneous Speaking; or 55A, Elementary Acting, and 11A or 11B, Interpretation, or 1, Voice and Diction; or 81, Survey of Radio | 12 |

*Upper Division*

| | |
|---|---|
| Upper division Speech Arts electives selected with the approval of departmental representative | 9 |

# CURRICULA LEADING TO CREDENTIALS IN ADMINISTRATION AND SUPERVISION

## CURRICULA LEADING TO CREDENTIALS IN ELEMENTARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the general requirements of the State of California for all degrees, he candidate shall meet the following requirements:

(a) Possess a valid General Elementary Credential.
(b) Present written evidence of two years of successful teaching experience in the elementary schools.
(c) Complete 30 semester units for the Administration Credential (24 units for the Supervision Credential) of upper division or graduate work in addition to the holding of the General Elementary Credential. These units shall include specific courses designed by the State Department of Education and the college.
(d) Maintain a grade point average of 1.75 in work taken subsequent to receipt of the General Elementary Credential.
(e) Complete a minimum of 15 units of work in residence at San Diego State College.
(f) Make formal application to the Director of Elementary Education.
(g) Earn the recommendation of the Department of Education.

Students applying for the Elementary Administration or Supervision Credentials hould register with the office of the Dean of Education and confer with the Director f Elementary Education concerning the courses which may be offered in satisfaction of he requirements. Outlines of pattern requirements for either the Elementary Superision or Administration Credentials may be obtained by writing the Director of Elenentary Education.

## SPECIAL SUBJECT SUPERVISION CREDENTIAL

This credential is available for persons who wish to supervise in a special subect area. Those desiring this credential should see the Dean of Education.

## CURRICULA LEADING TO CREDENTIALS IN SECONDARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the general requirements of the State of California for all degrees, he candidate shall meet the following requirements:

(a) Possess a valid General Secondary Credential.
(b) Present written evidence of two years of successful teaching experience.
(c) Complete 18 semester units for the Administration Credential (15 semester units for the Supervision Credential) of upper division or graduate work after holding a valid General Secondary Credential. These units must include a specific pattern of courses designed by the State Department of Education and the college.
(d) Maintain a grade point average of 1.75 on units under (c).
(e) Complete a minimum of 12 units of work in residence at San Diego State College after holding the General Secondary Credential.
(f) Make formal application to the Director of Secondary Education.
(g) Earn the recommendation of the Department of Education.

Students applying for the Secondary Administration or Supervision Credentials hould register with the office of the Dean of Education and confer with the Director f Secondary Education concerning the courses which may be offered in satisfaction of he requirements. Outlines of pattern requirements for either the Secondary Superviion or Administration Credentials may be obtained by writing the Director of Secndary Education.

# THE BACHELOR OF EDUCATION DEGRE AND THE GENERAL ELEMENTARY CREDENTIAL

## ELIGIBILITY FOR CANDIDACY

Teachers holding the Provisional General Elementary School Credential eligible for candidacy for the Bachelor of Education Degree. The purpose of this deg is to increase the professional competence of teachers who do not hold a bachelo degree. The educational program of each applicant shall be determined on the ba of his previous preparation and of the services he is to render. In the period of p fessional preparation the applicant shall be guided into those learning experien designed to meet his cultural and professional needs.

## MINIMUM REQUIREMENTS

An applicant for the general elementary credential and the Bachelor of Edu tion Degree shall comply with the procedures for application and with the requireme for personal qualifications and general training and shall have completed a progr including the following minimum requirements:

- a. A four-year college course of 120 semester units, or the equivalent.
- b. Eighteen semester units, or the equivalent, of professional work in educati constituting an organized program designed to prepare candidates in t following areas:
    - (1) The evolution of educational thought and practice as to the function the school in a democratic society, with emphasis on the elementa school.
    - (2) The nature of individual growth and development; the psychologi aspects of learning; child study, with emphasis on directed observation children; mental hygiene and personality development; parent edu tion; guidance practices.
    - (3) The selection and arrangement of learning experiences, instructio materials, learning methods and appraisal techniques related to statutory requirements for teaching, including reading, writing, spelli language study, arithmetic, geography, history of the United States a of California, civics including the Constitution of the United Stat music, art, physical education, healthful living, morals and manne safety education, and fire prevention.
    - (4) The use of audio-visual aids in instruction.
- c. Directed teaching in the elementary school, eight semester units, or t equivalent, under the supervision of superior teachers in actual classroo situations of the elementary school level.
- d. Sixty-one semester units or the equivalent in basic subject fields, distribut approximately as follows:
    - (1) *Social Studies.* Twelve semester units, or the equivalent, with empha upon current economic, political, and social problems and world histo and geography, sociology and anthropology. The legal requirement United States Constitution and American history, institutions, a ideals shall be included in the social studies program.
    - (2) *Science.* Twelve semester units, or the equivalent, in the fields physical and biological science, with emphasis upon the study and u of the environment.

(3) *English,* including speech. Twelve semester units, or the equivalent, including oral and written expression, world literature, children's literature, dramatics, detection and correction of speech defects, and the use of books and libraries.

(4) *Mathematics.* Three semester units, or the equivalent, including subject matter and techniques essential in the teaching of mathematics in the elementary school.

(5) *Health and Hygiene.* Three semester units, or the equivalent, including personal hygiene, subject matter and techniques essential in health education to elementary school pupils.

(6) *Physical Education.* Three semester units, or the equivalent, including subject matter and techniques essential in the teaching of physical education to elementary school pupils.

(7) *Music.* Eight semester units, or the equivalent, including content and techniques appropriate for the elementary school.

(8) *Art.* Eight semester units, or the equivalent, in graphic art and industrial arts applicable to learning experiences appropriate for elementary school children.

e. The remaining units necessary to complete the requirements for the Bachelor of Education degree shall be distributed among those offerings of the institution that best serve the cultural and professional needs of the candidate.

## EVALUATION OF TEACHING EXPERIENCE AND SUBJECT MATTER FIELDS

a. A candidate with two or more years' teaching experience may be awarded a maximum of 8 semester units of credit, or the equivalent, in directed teaching provided he demonstrates satisfactory skill to a representative of the institution under whose direction he is completing his degree program, or provided other conditions set by the institution to insure classroom skill are met. This credit shall not be applied until the candidate has completed at least 112 semester units, or the equivalent, of his program.

b. Credit toward the B. Ed. degree may be secured by passing comprehensive examinations in the fields of study mentioned in paragraphs (b) and (d) above.

## INSTITUTION AND RESIDENCE REQUIREMENTS

a. A minimum of 30 semester units, or the equivalent, must be secured from the college conferring the degree.

b. At least 12 semester units, or the equivalent, must be earned in campus residence course work at the college conferring the degree and must be secured after completion of at least 90 semester units, or the equivalent.

c. A maximum of 30 units may be secured by examination.

# THE BACHELOR OF SCIENCE DEGREE

The Bachelor of Science Degree will be offered in certain curricula to be designated at a later date. Students interested in this degree should obtain supplementary information from the Office of the Registrar.

# PREPROFESSIONAL AND VOCATIONAI CURRICULA

Preprofessional and vocational curricula, ranging in length from two to f years of collegiate work, are offered. Curricular outlines of preprofessional stu which are presented on the following pages, meet the typical requirements for adr sion to professional schools. Students expecting to complete their professional train at other institutions should modify the suggested outlines of study to meet the requ ments of the professional schools of their choice. Curricular outlines for comp training leading to vocations are also presented on the following pages.

Curricular outlines are presented for agriculture, commerce, dentistry, educat engineering, home arts, inter-American relations, journalism, law, life science oc pations, medicine, nursing, optometry, pharmacy, recreation, and veterinary scie Students desiring to modify these curricular outlines in terms of liberal arts ma should consult the advisers in the respective curricula.

## PRE-AGRICULTURAL CURRICULA

The high school program should include the following subjects: element algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonome ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit; fore language, 3 units in one language.

Students should ascertain the lower division requirements of the agricultu college they expect to enter.

### CURRICULUM IN PLANT SCIENCE

| Freshman Year | Units<br>1st Sem. | 2<br>Se |
|---|---|---|
| Physical Education (activity courses) | ½ | |
| Health Education 21, Principles of Healthful Living | 2 | - |
| Chemistry 1A-1B, General | 5 | 5 |
| Botany 2A-2B, General | 4 | 4 |
| Physics 2A-2B, General | 3 | 3 |
| English 1, Freshman Composition | - | 3 |
| Elective | 2 | 1 |
| | 16½ | 16 |

| Sophomore Year | 1st Sem. | Se |
|---|---|---|
| Physical Education (activity courses) | ½ | |
| Economics 1A-1B, Principles | 3 | 3 |
| English 2, Freshman Literature, or optional course | - | 3 |
| Chemistry 101, Elementary Organic, and 102, Laboratory | 4 | 3 |
| Geology 1A, Physical, or 2A, General | 3 | - |
| Bacteriology 1, General | - | 4 |
| Zoology 1A, General | 4 | - |
| Psychology 1, General | - | 3 |
| Elective | 2 | - |
| | 16½ | 16 |

## CURRICULUM IN ANIMAL SCIENCE

| Freshman Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Chemistry 1A-1B, General | 5 | 5 |
| Zoology 1A-1B, General | 4 | 4 |
| Physics 2A-2B, General | 3 | 3 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| | 15½ | 15½ |

| Sophomore Year | | |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Psychology 1, General | 3 | – |
| Economics 1A-1B, Principles | 3 | 3 |
| Bacteriology 1, General | – | 4 |
| Botany 2A, General | 4 | – |
| Chemistry 101, Elementary Organic, and 102, Laboratory | 4 | 3 |
| Zoology 100, Embryology | – | 3 |
| Zoology 20, Human Anatomy and Physiology, or 8, Human Anatomy | – | 3 |
| | 16½ | 16½ |

## COMMERCE CURRICULUM

The first two years of the curriculum are introductory. During this period the student acquires a basis for further study and an understanding of the place that business fills in modern economic life. The choice of the major field should be made at the beginning of the junior year. The student then follows a program of studies that is designed to provide a vocational ability in at least one particular area: (A) Accounting; (B) Banking and Finance; (C) Business Administration; (D) Marketing; or (E) Secretarial.

| Lower Division | | Units |
|---|---|---|
| Physical Education (activity courses) | | 2 |
| English 8, Business English, and 2, Freshman Literature, or optional course | | 6 |
| Health Education 21, Principles of Healthful Living | | 2 |
| Psychology 1, General | | 3 |
| Natural Sciences (including Geography 1, Elements) | | 9–12 |
| History, Political Science, or Sociology | | 3–6 |
| Geography 10, Economic (not required in the Marketing field) | | 3 |
| Economics 1A-1B, Principles | | 6 |
| Commerce 2, Mathematics of Finance (not required in the Marketing or Secretarial fields) | | 3 |
| Commerce 14A-14B, Principles of Accounting (students in Secretarial field take 16A-16B instead) | | 6 |
| Commerce 18A-18B, Commercial Law | | 6 |
| Electives | | 0–8 |
| Marketing subfield must include: | | |
| Commerce 20, Consumer Economics | 3 | |
| Commerce 24, Merchandising | 3 | |
| Commerce 25, Salesmanship | 3 | |
| Commerce 27, Advertising Principles | 3 | |
| Art 7, Line, Color, Display | 2 | |
| Secretarial subfield must include: | | |
| Commerce A, Business Mathematics | 1 | |
| Commerce 1A-1B, Typewriting | 6 | |
| Commerce 5A-5B, Shorthand | 10 | |
| (Students knowing typewriting or shorthand must take placement examinations in these subjects before enrolling in 1A-1B or 5A-5B. It is recommended that shorthand be taken in the junior year.) | | |
| | | 60 |

| **Upper Division** | *Un* |
|---|---|
| Minor (in addition to courses applied toward the major) | 9 |
| Major | 24– |

For (A) *Accounting;* (B) *Banking and Finance;* (C) *Business Administration;* and (D) *Marketing,* the following courses must be included: Economics 111, Economic History of the United States, or 170, Government and Business, or Commerce 123, Marketing Principles; Economics 140, Statistical Methods; Commerce 121, Business Administration; and 15 uints selected from one of the following groups:

A. *Accounting:* Commerce 160A-160B, 161A-161B, 162, 164A-164B, 165A-165B.
B. *Banking and Finance:* Commerce 133, 134, 137; Economics 131, 135, 142.
C. *Business Administration:* Commerce 123, 125, 126, 127A, 133, 134, 137, 153, 184; Economics 128, 142, 150, 170.
D. *Marketing:* Commerce 123, 124, (students who wish to specialize in insurance may elect 127B, 128A, 128B), 137, 153, 184, 185, 186, 187A, 187B, 188, 189; Home Economics 160A, 160B.

For (E) *Secretarial:* Major: 25 units to include the following courses: Commerce 103A-103B, Office Management, 113A-113B, Secretarial Office Practice, 123, Marketing Principles, 153, Personnel Administration, and 164A, Income Tax Procedure. Directed electives: an additional 9 units selected from Commerce 121, 186, 188, Economics 111, 135, 142, 150, or 170, with approval of departmental representative.

| | |
|---|---|
| Electives (to include minimum 40 upper division unit requirement) | 17– |
| | 6 |

## PRE-DENTAL CURRICULUM

Candidates for a degree in dentistry should ascertain the entrance requiremen of the dental college to which they expect to transfer and should make whatev changes in the following typical requirements that may seem desirable in satisfyi the requirements of the specific dental college.

The high school program should include the following subjects: elementa algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; forei language, 3 units in one language; mechanical drawing, 1 unit.

| **Freshman Year** | *Units*<br>*1st Sem.* | *2d*<br>*Se* |
|---|---|---|
| Physical Education (activity courses) | ½ | |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Chemistry 1A-1B, General | 5 | 5 |
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Physical Measurements | 1 | 1 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Psychology 1, General | – | 3 |
| Elective | 0–2 | 0– |
| | 16½ | 16 |

| **Sophomore Year** | | |
|---|---|---|
| Physical Education (activity courses) | ½ | |
| Chemistry 101, Elementary Organic, and 102, Laboratory | 4 | 3 |
| Zoology 1A-1B, General | 4 | 4 |
| Mathematics C, Intermediate Algebra, and D, Trigonometry | 3 | 3 |
| Social Science (year course selected from Anthropology 1A-1B, General; Economics 1A-1B, Principles; History 4A-4B, Modern Europe, or 8A-8B, the Americas, or 17A-17B, American Civilization; Political Science 1A-1B, Introduction to Government | 3 | 3 |
| Electives (a course in public speaking is recommended) | 2 | 3 |
| | 16½ | 16½ |

The following courses are suggested for a third year in preparation for dentistry or those who fail to receive an acceptance from a dental college after completing the rescribed 60 units.

| Junior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| hemistry 5, Quantitative Analysis | 3 | – |
| oology 106, Comparative Anatomy of the Vertebrates | 4 | – |
| oology 100, Embryology | – | 4 |
| rt 119A, Ceramics (see prerequisite) | 2 | – |
| sychology 11, Applied | – | 3 |
| dditional Year Course in Social Science | 3 | 3 |
| lectives | 4 | 6 |
|  | 16 | 16 |

The curriculum for Dental Hygiene is essentially the same as the above for preentistry.

## ENGINEERING CURRICULUM

In recent years the engineering profession has become so complex and diversified hat an almost endless number of specialties has arisen. Many engineering colleges nd universities have attempted to encompass these specialties with the addition of ore and more specialized courses to their curricula. This has resulted in two things, he gradual crowding out of nearly all nontechnical courses, and an increase in the umber of units required for graduation to approximately the equivalent of another ear's work. This has produced graduates who are expert technicians but who lack he broad education essential to the understanding of modern society.

It is recognized that all successful engineers must have a thorough grounding the fundamental sciences and mathematics on which technology depends. Also they ust have a broad general education in order that they may intelligently apply their echnical skills and knowledge to the problems of society.

The engineering program at San Diego State College is designed to give the tudent a sound training in the fundamentals of engineering with a minimum of pecialization and at the same time the broad training and experiences which contitute a liberal education. The Bachelor of Arts Degree is offered at present in Engieering; however, the Bachelor of Science Degree will soon become an optional degree. tudents interested in the Bachelor of Science Degree should consult with the Chairan of the Department concerning further details.

### FIELDS OF SPECIALIZATION

In the freshman and sophomore years all students majoring in engineering are xpected to take the courses listed below. In the junior and senior years optional prorams are available which provide limited specialization in *aeronautical, chemical, vil, electrical, electronic or mechanical engineering*, or *engineering physics* or *engieering economics*. Normally, students are expected to elect one of these basic options. n certain cases equivalent programs may be worked out which will better suit the eeds of the individual student.

It should be noted that the engineering major allows considerable latitude in e choice of electives in the junior and senior years. Students are encouraged to hoose electives which suit their particular needs in broadening their training in the eld of general education. The choice of electives must follow a logical plan approved y the faculty adviser.

### MINOR FIELD

Students majoring in engineering must elect a *minor* in one of the following elds: *Chemistry, economics, mathematics*, or *physics*. The upper division economics d mathematics courses included in the curriculum may be used in partial fulfillment the requirements for the minor in those fields. Engineering 102A-102B may be subituted for Physics 105A-105B in partial fulfillment of the requirement for a physics inor.

### PREPARATION FOR TRANSFER

Students may stay at San Diego State College for less than four years and then mplete their training for professional engineering at some other engineering school. such cases the curriculum for the first two years will be essentially the same as that given below, but the student should plan his work carefully with the help of a facul adviser to insure satisfaction of all requirements.

## HIGH SCHOOL PREPARATION

The high school program should include the following subjects: Elementa algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; solid geometr ½ unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical dra ing, 1 unit.

### Lower Division

Courses must be included to satisfy all college requirements for the A.B. Degre except the foreign language requirement. See section entitled: Lower Division Requir ments for All Curricula.

| | Units<br>1st Sem. | 2d Se |
|---|---|---|
| *Freshman Year* | | |
| Math. 3A-3B, Analytic Geometry and First Course in Calculus | 3 | 3 |
| Physics 1A-1B, Mechanics of Solids, Fluids, Heat and Sound, or 4A, Mechanics, beginning in second semester of freshman year | 0–3 | 3– |
| Chemistry 1A-1B, General Chemistry | 5 | 5 |
| English 1, Freshman Composition | 3 | – |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Biology 1, Survey of Biology (unless taken in high school) | – | 3 |
| Physical Education (activity courses) | ½ | |
| Electives | 0–3 | 1– |
| | 16½ | 16 |
| *Sophomore Year* | | |
| Math. 4A-4B, Second and Third Courses in Calculus | 3 | 3 |
| Physics 1C-1D, Electricity and Magnetism, Light and Atomic Physics, or 4B, Electricity, and 4C, Heat, Sound, and Light | 3–4 | 3–4 |
| Economics 1A-1B, Principles of Economics | 3 | 3 |
| Engineering 21, Descriptive Geometry | 3 | – |
| Physical Education (activity courses) | ½ | ½ |
| Other courses to complete lower division preparation, including Psychology 1, English, and Social Science (see section entitled: Lower Division Requirements for All Curricula.) | 3–4 | 6–7 |
| | 16½ | 16½ |

One of the following groups of courses is required, dependent upon the field specialization desired in the upper division:

| | Unit |
|---|---|
| For Civil Engineering | |
| Engineering 1A-1B, Plane Surveying | 6 |
| Astronomy 3, Surveyor's Course in Practical Astronomy | 3 |
| For Mechanical, Electrical and Aeronautical Engineering | |
| Engineering 1A, Plane Surveying | 3 |
| Engineering 22, Machine Drawing | 3 |
| Elective | 3 |
| For Chemical Engineering | |
| Chemistry 5, Quantitative Analysis | 3 |
| Chemistry 101, Organic Chemistry | 4 |
| Elective | 2 |
| For Engineering Economics | |
| Commerce 14A-14B, Principles of Accounting | 6 |
| Elective | 3 |
| For Engineering Physics | |
| Engineering 22, Machine Drawing (recommended) | 3 |
| Elective | 6 |

Students should, if possible, complete all of the college lower division requirements in the sophomore year. Any not completed then must be completed in th junior year.

### Upper Division

All upper division requirements for the A.B. Degree must be met. These include:

Examination in American History and U. S. Constitution.

Completion of a minimum of 24 upper division units for the major.

Completion of a minimum of 9 upper division units for the minor in one of the ollowing fields: Chemistry, economics, mathematics, or physics.

The courses required for the engineering major include a core group plus those equired for each field of specialization. These are indicated below.

The choice of a field of specialization and the choice of electives must be approved y the engineering department. Students normally will submit master plans of their pper division program for departmental approval at the beginning of the junior year. ny subsequent deviation from this plan must be approved by the department.

### equired for All General Engineering Students

| *unior Year* | *Units* |
|---|---|
| Engineering 102A-102B, Analytical Mechanics | 6 |
| Engineering 100A-100B, Elements of Electrical Engineering | 6 |
| Engineering 140, Strength of Materials | 3 |

| *enior Year* | |
|---|---|
| Engineering 128, Applied Engineering Thermodynamics | 3 |
| Engineering 105, Hydraulics | 3 |
| Engineering 199, Senior Report | 2 |

### dditional Requirements for Various Fields of Specialization

*Aeronautical Engineering*

| *Junior Year* | |
|---|---|
| Engineering 122, Machine Design | 3 |
| Engineering 141, Materials of Engineering Laboratory | 2 |
| Mathematics 118 or 119 or 124 | 3 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 4 |

| *Senior Year* | |
|---|---|
| Engineering 156, Aerodynamics | 3 |
| Engineering 142, Stress Analysis | 3 |
| Engineering 129, Heat Power Laboratory | 2 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 11 |

*Chemical Engineering*

| *Junior Year* | |
|---|---|
| Chemistry 102, Organic Chemistry Laboratory | 3 |
| Engineering 141, Materials of Engineering Laboratory | 2 |
| Mathematics 118 or 119 or 124 | 3 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 4 |

| *Senior Year* | |
|---|---|
| Chemistry 110A-110B, Physical Chemistry | 6 |
| Chemistry 144A-144B, Chemical Engineering | 6 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 7 |

*Civil Engineering*

| *Junior Year* | |
|---|---|
| Engineering 130, Route and Construction Surveying | 3 |
| Engineering 141, Materials of Engineering Laboratory | 2 |
| Mathematics 118 or 119 or 124 | 3 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 4 |

*Senior Year*

| | Un |
|---|---|
| Engineering 131, Advanced Surveying | 3 |
| Engineering 106, Hydraulics Laboratory | 2 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 14 |

*Electrical Engineering*

*Junior Year*

| | |
|---|---|
| Engineering 101A-101B, Electrical Engineering Laboratory | 4 |
| Mathematics 118 or 119 or 124 | 3 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 5 |

*Senior Year*

| | |
|---|---|
| Physics 107, Electrical Measurements | 2 |
| Physics 102, Electronics | 3 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 14 |

*Mechanical Engineering*

*Junior Year*

| | |
|---|---|
| Engineering 122, Machine Design | 3 |
| Engineering 141, Materials of Engineering Laboratory | 2 |
| Mathematics 118 or 119 or 124 | 3 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 4 |

*Senior Year*

| | |
|---|---|
| Engineering 129, Heat Power Laboratory | 2 |
| Engineering 106, Hydraulics Laboratory | 2 |
| Engineering 145, Internal Combustion Engines | 3 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 12 |

*Engineering Economics*

*Junior Year*

| | |
|---|---|
| Commerce 121, Business Administration | 3 |
| Economics 133, Corporation Finance | 3 |
| Commerce 18A, Commercial Law | 3 |
| Economics 140, Statistics | 3 |
| Elective | 3 |

*Senior Year*

| | |
|---|---|
| Economics 170, Government and Business | 3 |
| Commerce 150, Labor Problems | 3 |
| Economics 131, Public Finance | 3 |
| Electives | 13 |

*Engineering Physics*

*Junior Year*

| | |
|---|---|
| Mathematics 118 or 119 or 124 | 3 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 9 |

*Senior Year*

| | |
|---|---|
| Physics 102, Electronics | 3 |
| Physics 107, Electrical Measurements | 2 |
| Physics 110A, Electricity and Electromagnetism | 3 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 11 |

*Electronics Engineering*

*Junior Year*

| | *Units* |
|---|---|
| Physics 102, Basic Electronics | 3 |
| Engineering 104 or Physics 104, Communications | 2 |
| Physics 122, Electronics Laboratory | 2 |
| Mathematics 118 or 119 or 124 | 3 |
| Economics 131 or 150 or 170 | 3 |
| Elective | 1 |

*Senior Year*

| | |
|---|---|
| Engineering 124 or Physics 124, Radio Measurements | 2 |
| Engineering 150, Industrial Electronics | 2 |
| Physics 152, Advanced Electronics | 2 |
| Physics 107, Electrical Measurements | 2 |
| Economics 131 or 150 or 170 | 3 |
| Electives | 11 |

## PRE-FORESTRY CURRICULUM

Students desiring to enter professional training in forestry should ascertain the ntrance requirements of the college to which they expect to transfer and should make hatever changes in the following suggested pre-forestry courses that may seem esirable in satisfying the requirements of that college.

The high school program should include the following subjects: English, 4 units; lementary Algebra and Plane Geometry, 2 units; Intermediate Algebra, 1 unit; Solid eometry, ½ unit; Trigonometry, ½ unit; Physics, 1 unit; Chemistry, 1 unit; History, unit; Geometrical Drawing, 1 unit; foreign language, 2 to 4 units, preferably erman or French.

| **Freshman Year** | *Units*<br>*1st Sem.* | <br>*2nd Sem.* |
|---|---|---|
| hysical Education (activity courses) | ½ | ½ |
| hemistry 1A-1B, General | 5 | 5 |
| otany 2A-2B, General | 4 | 4 |
| nglish 1, Composition, and English 2, Literature | 3 | 3 |
| athematics 3A, Plane Analytic Geometry | 3 | – |
| athematics 3B, First Course in Calculus | – | 3 |
| | 15½ | 15½ |

| **Sophomore Year** | | |
|---|---|---|
| hysical Education (activity courses) | ½ | ½ |
| hysics 2A-2B, General | 3 | 3 |
| hysics 3A-3B, Physical Measurements | 1 | 1 |
| ngineering 1A-1B, Plane Surveying | 3 | 3 |
| conomics 1A-1B, Principles | 3 | 3 |
| eology 2A, General | 2 | – |
| ealth Education 21, Principles of Healthful Living | – | 2 |
| sychology 1, General | 3 | – |
| hemistry 101, Elementary Organic | – | 4 |
| | 16½ | 16½ |

## HOME ARTS CURRICULUM

The Home Arts curriculum is designed to meet the needs of those studen who wish to apply their knowledge to the various problems of home living. This curric lum is based on the *general major* in arts and sciences with a field of concentration Home Economics combined with two other fields to be selected by the student in co sultation with the Chairman of the Department of Home Economics and the De of Arts and Sciences. (For specific information on the *general major*, refer to the se tion entitled: Upper Division Requirements for the Bachelor of Arts Degree in A and Sciences.) By appropriate selection of courses, the student may prepare for t fields of journalism, radio, community recreation, home service in industry, me chandising, and several phases of social work.

The outline of courses listed below is suggested as a plan for the *general maj* with Home Economics as a field of concentration.

### Lower Division

| | *Units* | |
|---|---|---|
| *Freshman Year* | *1st Sem.* | *2d Se* |
| Physical Education (activity courses) | ½ | |
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 3 | 3 |
| Psychology 1, General | 3 | – |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Chemistry 2A-2B, General | 3 | 3 |
| Art 6A, Design | 2 | – |
| Home Economics 1, Home and Family Life | – | 3 |
| Electives (See lower division requirements, page 17. Student should also see prerequisites for upper division courses for the general major) | 3 | 7 |
| | 16½ | 16 |
| *Sophomore Year* | | |
| Physical Education (activity courses) | ½ | |
| Home Economics 61A-61B, Nutrition and Laboratory | – | 3 |
| Home Economics 5, Food Preparation | 3 | – |
| Home Economics 10, Fundamentals of Clothing | – | 3 |
| Sociology 50A-50B, Introduction | 3 | 3 |
| Electives (completion of lower division requirements and prerequisites for upper division courses for the general major) | 10 | 7 |
| | 16½ | 16 |

Preparation for U. S. Constitution and American History requirement.

Suggested electives for the first two years:

- Biology 10A-10B (6), or Biology 1 (3), Zoology 20 (3)
- Physics 2A-2B (6)
- Speech Arts 2A-2B (6)
- History 17A-17B (6)
- Health Education 90 (1)
- Art 6B (2), 61B (2)

### Upper Division

Home Economics courses to satisfy the general major should be selected from th following:

| | *Unit* |
|---|---|
| Home Economics 101, Clothing Selection | 3 |
| Home Economics 105, Family Meals | 3 |
| Home Economics 108, Marriage and the Family | 3 |
| Home Economics 160A, Merchandise Analysis—Textiles | 2 |
| Home Economics 160B, Merchandise Analysis—Non-Textiles | 2 |
| Home Economics 102, Child Growth and Development | 3 |

## INTER-AMERICAN RELATIONS

The purpose of this curriculum is (1) to furnish a basis for a more intelligent and ffective understanding of the opportunities and problems of international relations in e western hemisphere; (2) to provide facilities for a basic education and training for business or professional career which involves international relations.

Competition for opportunities of service in international affairs is severe. The udent who plans a career in this field should therefore organize his electives to provide r a concentration in some area of work in which there are greater vocational opportuities. Preparation for employment as a foreign representative of an American business ganization implies concentration in economics. The student who pursues this curricum as a guide for training for the foreign service in consular, vice consular, secretarial, nd other public offices should include additional courses in foreign language, history, litical science, geography, and economics to furnish more effective preparation for e comprehensive competitive examinations required for appointment to the Service nd for entrance to the Foreign Officers Training School at Washington, D. C.

This program should be completed either with a major in economics or a general ajor. Consult the Dean of Arts and Sciences for details.

The high school program should include the following subjects: algebra, 1 unit; ane geometry, 1 unit; foreign language, 3 units in one language, preferably Spanish.

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| hysical Education (activity courses) | ½ | ½ |
| ealth Education 21, Principles of Healthful Living | 2 | – |
| nglish 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| panish | 0–5 | 0–5 |
| atural Science (see page 18) | 3–5 | 3–5 |
| istory 8A-8B, History of the Americas | 3 | 3 |
| sychology 1, General | – | 3 |
| lective | 4–8 | 0–3 |
| | 15½ | 15½ |
| **Sophomore Year** | | |
| ysical Education (activity courses) | ½ | ½ |
| dditional Natural Science (if needed to meet requirement) | 0–3 | – |
| conomics 1A-1B, Principles | 3 | 3 |
| litical Science 1A-1B, Introduction to Government, or 71A-71B, Introduction to American Government and Politics | 3 | 3 |
| eography 1, Elements of Physical Geography | 3 | – |
| ective | 0–6 | 9 |
| | 15½ | 15½ |
| **Junior Year** | | |
| onomics 195, International Economic Relations | – | 3 |
| litical Science 150A-150B, International Relations | 3 | 3 |
| story 173A-173B, The Expansion of the United States | 3 | 3 |
| anish 104A-104B, Spanish-American Literature | 3 | 3 |
| lective | 3 | 3 |
| onomics elective | 3 | – |
| amination in U. S. Constitution | | |
| | 15 | 15 |
| **Senior Year** | | |
| onomics 190, Principles of Foreign Trade | – | 3 |
| onomics 198, Investigation and Report (Western Hemisphere) | 3 | – |
| story 161, Mexico and the Caribbean Countries | 3 | – |
| story 162, South America Since Independence | – | 3 |
| ography 116, Geography of Latin America | – | 3 |
| ography 121, Geography of North America | 3 | – |
| ectives from economics, history, political science, or geography to complete the general major | 3 | 3 |
| ective | 3 | 3 |
| | 15 | 15 |

# PRE-JOURNALISM CURRICULUM

Students desiring to emphasize journalism in working for the A.B. Degree at th college should work toward a general major with journalism included as one of t three major fields of study. (Refer to the section entitled: Upper Division Requir ments for the Bachelor of Arts Degree in Arts and Sciences, for explanation of t general major.)

The curriculum suggested below takes cognizance of the widely held contenti that a candidate for a position in the newspaper, magazine, or publishing field shou be more than a product of vocational training. A competent journalist must bring to h work a broad educational background, with particular emphasis on the social scienc

Students interested in specialized journalism (such as a foreign correspondenc scientific, financial, or political reporting) should attempt to fit specialized courses in their curricula. Additional social science courses are recommended as electives.

Students preparing for degrees in journalism from other colleges should ascerta entrance requirements of the college to which they expect to transfer, and should mo their programs accordingly.

The following curriculum is suggested for students who have not decided up any field of specialization within journalism:

## Lower Division

| | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Se* |
| *Freshman Year* | | |
| Physical Education (activity courses) | ½ | |
| Health Education 21, Principles of Healthful Living | 2 | - |
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 3 | 3 |
| Psychology 1, General; and 10, Advanced General, or 11, Applied | 3 | 3 |
| History 4A-4B, Modern Europe, or 8A-8B, The Americas, or 17A-17B, American Civilization (this course, if elected, must be taken in the sophomore year) | 3 | 3 |
| Natural Science (see Lower Division Requirements for All Curricula) | 3 | 3 |
| Elective | - | 3 |
| | 14½ | 15 |
| *Sophomore Year* | | |
| Physical Education (activity courses) | ½ | |
| Journalism 51A, Elements | 3 | - |
| Journalism 51B, News Gathering and Reporting | - | 3 |
| Foreign Language (if not completed in high school) | 5 | 5 |
| Natural Science | 3 | 3 |
| Economics 1A-1B, Principles; or Sociology 50A-50B, Introduction and General | 3 | 3 |
| Library Science 10, Use of the Library | - | 2 |
| | 14½ | 16 |

## Upper Division

On acquiring upper division status, the student should confer with his adviser planning courses to meet his specific and specialized needs and that meet the requir ments for the A.B. Degree with a general major, including U. S. Constitution ar American history graduation requirement.

# LABORATORY TECHNICIAN—CLINICAL, MEDICAL, OR PUBLIC HEALTH

The preparation for laboratory technician in clinical, medical, or public health fields is the same, except that the license for Medical Laboratory Technician requires five years of experience as a clinical technician. For the Clinical Laboratory Technician license a six months' apprenticeship must be served in an approved laboratory.

Select courses for major and minor in consultation with adviser.

## Lower Division

| | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| *Freshman Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | – | 2 |
| Psychology 1, General | 3 | – |
| Chemistry 1A-1B, General | 5 | 5 |
| English 1, Freshman Composition, and 2, Freshman Literature | 3 | 3 |
| Zoology 1A, General | 4 | – |
| Social Science (see lower division requirements) | – | 3 |
| Elective | – | 3 |
| | 15½ | 16½ |
| *Sophomore Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Chemistry 5, Quantitative Analysis | – | 3 |
| Bacteriology 1, General | 4 | – |
| Physics 2A, General | 3 | – |
| Physics 3A, Physical Measurements | 1 | – |
| Physiology 1A, 1C, General | – | 5 |
| Foreign Language (if needed) | 5 | 5 |
| Social Science (see lower division requirements) (see also U. S. History and Constitution requirements) | 3 | 3 |
| | 16½ | 16½ |

## Upper Division

| | | |
|---|---|---|
| *Junior Year* | | |
| Chemistry 101, 102, Organic | 4 | 3 |
| Bacteriology 102, Advanced | – | 4 |
| Zoology 111, Parasitology | 4 | – |
| Electives (to include major and minor fields) | 7 | 8 |
| *Senior Year* | | |
| *Chemistry 114, 115, Biochemistry | 3 | 2 |
| *Zoology 145, Haematology | 3 | – |
| Electives to satisfy A.B. Degree requirements, including major and minor fields | 9 | 12 |
| | 15 | 14 |

* Not required for Public Health Laboratory Technician certificate.

# PRE-LEGAL CURRICULUM

*The entrance requirements of law colleges range from two years to three and fou years of pre-legal work. The lower division requirements of the arts and scienc curricula should be met in full whether the curriculum extends over a period of two three, or four years.*

The following curriculum meets the recommendations of standard American la colleges for a broad and liberal education. For the majority of pre-legal students general major with concentration in economics, political science, and history, or major-minor combination in these fields, will constitute the most effective preparatio for later professional study in law and for later activities in the field of business. (Fo description of the general major, refer to the section entitled: Upper Division Require ments for the Bachelor of Arts Degree in Arts and Sciences.)

### Lower Division

| | *Units* 1st Sem. | *Units* 2d Sem |
|---|---|---|
| *Freshman Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | – | 2 |
| Foreign Languages (if needed to complete requirement) | 0–5 | 0–5 |
| Natural Science (see lower division requirements) | 3–6 | 3–6 |
| English 1, Freshman Composition, and English 2, Freshman Literature, or optional course | 3 | 3 |
| Commerce 14A-14B, Principles of Accounting | 3 | 3 |
| Psychology 1, General | 3 | 0–4 |
| Elective | | |
| | 15½ | 15½ |
| *Sophomore Year* | | |
| Physical Education (activity courses) | ½ | ½ |
| Additional Natural Science (if needed to meet requirement) | 3 | – |
| Economics 1A-1B, Principles of Economics | 3 | 3 |
| Philosophy 1A-1B, Introduction, or 3A-3B, History of Thought | 3 | 3 |
| Political Science 1A-1B, Introduction to Government or 71A-71B, Introduction to American Government and Politics | 3 | 3 |
| Electives | 3 | 6 |
| | 15½ | 15½ |

### Upper Division

In the junior and senior years, the student should select his concentration according to the general field of legal practice in which he will be working, with the counsel of his adviser and the departments most concerned. For example, a student expecting to work in the foreign service or international field on an administrative level would probably have his major concentration in international law. Students going into federal employment on an administrative level would need appropriate political science courses. A student expecting to become a lawyer working in the field of criminal law would include pertinent sociology courses (105, 106) in his program. For the broad field of general legal practice and its relations with the field of business, the economics area will constitute the concentration. Since this latter area is by far the larger, more students will be interested in the suggested curriculum given below. It is flexible, to be varied according to the aims of the student with the counsel of his advisers and members of the departments in which he wishes to concentrate.

| | *Units* | |
|---|---|---|
| *Junior Year* | *1st Sem.* | *2d Sem.* |
| Economics 133, Corporation Finance | - | 3 |
| Economics 150, Labor Problems | 3 | - |
| Economics Elective | - | 3 |
| History 151A-151B, History of England, or 172A-172B, Constitutional History of the United States | 3 | 3 |
| Political Science 111A-111B, Theory of the State, or 140 Principles of Public Administration, and 141, Organization and Procedure in Public Administration | 3 | 3 |
| Sociology 105, Social Pathology, and 106, Criminology and Penology | 3 | 3 |
| Electives (see upper division requirements) | 3–6 | 3–6 |
| Examination in U. S. Constitution, American history, institutions, and ideals | | |
| | 15 | 15 |

| | | |
|---|---|---|
| *Senior Year* | | |
| Economics 100A, Modern Economic Thought | 3 | - |
| Economics 170, Government and Business | 3 | - |
| Economics Elective (Economics 131 recommended) | - | 3 |
| History 111A-111B, Ancient History, or 121A-121B, Medieval History | 3 | 3 |
| Political Science 153, Principles of International Law, and 154, International Law and the Courts | 3 | 3 |
| Electives | 3 | 6 |
| | 15 | 15 |

## LIFE SCIENCE VOCATIONAL CURRICULA

Students planning to enter any of the terminal curricula listed below should nclude in their high school program the following subjects: elementary algebra, unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, units.

### Lower Division

| | *Units* | |
|---|---|---|
| *reshman Year* | *1st Sem.* | *2d Sem.* |
| English 1, Freshman Composition, and 2, Freshman Literature or optional course | 3 | 3 |
| Chemistry 1A-1B, General | 5 | 5 |
| Zoology 1A-1B, General | 4 | 4 |
| Social Science (see page 18) | 3 | 3 |
| Physical Education (activity courses) | ½ | ½ |
| | 15½ | 15½ |

| | | |
|---|---|---|
| *ophomore Year* | | |
| Botany 2A-2B, General | 4 | 4 |
| Bacteriology 1, General | 4 | - |
| Psychology 1, General | - | 3 |
| Social Science (see page 18) | 3 | 3 |
| Speech Arts 2A, Fundamentals of Public Speaking | 3 | - |
| Physical Education (activity courses) | ½ | ½ |
| Electives (complete lower division requirements) | 2 | 6 |
| | 16½ | 16½ |

Preparation for U. S. Constitution and American History graduation requirement.

### Upper Division

Work in the upper division should be planned in consultation with the Chairman the Division of Life Sciences. A terminal curriculum is offered leading to the llowing occupational fields: Entomology, fish and game, and wild life. Courses may be lected from those listed below.

## WILD LIFE, FISH AND GAME

General Entomology
Economic Entomology
Medical Entomology
Systematic Entomology
Cold Blooded Vertebrates
Parasitology
General Physiology
Ecology
Taxonomy of Plants
Microtechnique
Mammalogy
Ornithology
Economic Biology
Organic Chemistry
Statistics
Public Administration

## PRE-MEDICAL CURRICULUM

The entrance requirements of medical colleges ordinarily range from three to four years of pre-medical work. The lower division requirements of the liberal arts curricula include the general requirements of standard medical colleges and should therefore be met in full whether the curriculum extends over a period of three or of four years. All plans for pre-medical work should include an arrangement of courses to meet the requirements of the medical college which the student expects to enter.

A student who is pursuing a four-year pre-medical curriculum should major in chemistry or zoology in his junior and senior years, and must meet all upper division requirements for the A.B. Degree in the liberal arts curricula.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units. Two units of Latin are recommended.

### Lower Division

| | Units | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| ***Freshman Year*** | | |
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Chemistry 1A-1B, General | 5 | 5 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| French or German (if needed to meet requirement) | 0–5 | 0–5 |
| Elective | 0–5 | 0–5 |
| | 15½ | 16½ |
| ***Sophomore Year*** | | |
| Physical Education (activity courses) | ½ | ½ |
| Zoology 1A-1B, General | 4 | 4 |
| Psychology 1, General | 3 | – |
| Chemistry 5, Quantitative Analysis | 3 | – |
| Social Science | 3 | 3 |
| Elective | 3 | 9 |
| | 16½ | 16½ |

### Upper Division

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| ***Junior Year*** | | |
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Physical Measurements | 1 | 1 |
| Chemistry 101, Elementary Organic, and 102, Organic Chemistry Laboratory | 4 | 3 |
| Zoology 100, Embryology | – | 4 |
| Zoology 106, Comparative Anatomy of the Vertebrates | 4 | – |
| Electives | 4 | 4 |
| Examination in U. S. Constitution, American history, institutions, and ideals | | |
| | 16 | 15 |
| ***Senior Year*** | | |
| Upper division requirements and electives for the major in Chemistry or Zoology, the minor and the degree | 15 | 15 |
| | 15 | 15 |

## PRE-NURSING CURRICULUM

A student who plans to complete a curriculum in nursing leading to a degree and a certificate in nursing in another collegiate institution should ascertain the lower division requirements of that institution.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units; domestic science (foods), 1 unit; 2 units of Latin are recommended.

| Freshman Year | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | – | 2 |
| Biology A, Mathematics of Solutions and Dosage | 2 | – |
| Chemistry 2A-2B, Fundamentals | 3 | 3 |
| Home Economics 61A, Nutrition, and 61B, Nutrition Laboratory | – | 3 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| French or German (if needed to complete requirements) | 0–5 | 0–5 |
| Elective | 3–8 | 0–5 |
| | 16½ | 16½ |

| Sophomore Year | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Psychology 1, General, and 11, Applied | 3 | 3 |
| Economics 1A-1B, Principles, or Sociology 50A, Introduction, and 50B, General | 3 | 3 |
| Bacteriology 1, General | 4 | – |
| Physiology 1A, Human Physiology, and 1C, Laboratory | – | 5 |
| Zoology 8, Human Anatomy | 3 | – |
| Elective | 3 | 5 |
| | 16½ | 16½ |

## PRE-OPTOMETRY CURRICULUM

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; foreign language, 2 units.

The following curriculum prepares for junior standing in university schools of optometry. Student should consult the catalogue of the school to which he expects to ransfer.

| Freshman Year | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| Chemistry 1A-1B, General | 5 | 5 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Speech Arts 2A, Fundamentals of Public Speaking | – | 3 |
| Foreign Language (if needed to complete requirement) | 5 | 5 |
| Physical Education (activity courses) | ½ | ½ |
| Electives (social science or other lower division requirement) | 3 | 3 |
| | 16½ | 16½ |

| | Uni | |
|---|---|---|
| **Sophomore Year** | 1st Sem. | 2 Se |
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Physical Measurements | 1 | 1 |
| Psychology 1, General | – | 3 |
| Mathematics 3A, Plane Analytic Geometry | 3 | – |
| Social Science (complete requirement) | 3 | 3 |
| Physiology 1A, Human Physiology | – | 3 |
| Physiology 1C, Human Physiology (Laboratory) | – | 2 |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Chemistry 101, Elementary Organic | 4 | – |
| Physical Education (activity courses) | ½ | ½ |
| | 16½ | 15½ |

## PRE-PHARMACY CURRICULUM

The high school program should include the following subjects: elementar algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonometr ½ unit; chemistry, 1 unit; physics, 1 unit; foreign language, 2 units.

The American Association of Colleges of Pharmacy allows not more than or year of credit for work completed in an institution other than a college of pharmac Generally the first year work and part of that of the second year may be complete before transfer, the time required in the college of pharmacy cannot be reduced to les than three academic years. Students should ascertain the requirements of the colleg of pharmacy they expect to enter.

| | Units | |
|---|---|---|
| **Freshman Year** | 1st Sem. | 2d Sem |
| Physical Education (activity courses) | ½ | ½ |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Chemistry 1A-1B, General | 5 | 5 |
| Zoology 1A-1B, General | 4 | 4 |
| Botany 2A, General | 4 | – |
| Mathematics 1, College Algebra, or 3A, Plane Analytic Geometry (Prerequisite: Mathematics C and D, or two years of high school algebra and one-half year of trigonometry) | – | 3 |
| | 16½ | 15½ |

The following courses are also commonly required or recommended: (See, however, three-year rule, above.) Chemistry 5, Quantitative Analysis, 101, Elementar Organic, 102, Organic Chemistry Laboratory; Psychology 1, General; Physiology 1A Human Physiology, or Zoology 20, Human Anatomy and Physiology.

# PUBLIC ADMINISTRATION CURRICULUM

The Public Administration curriculum is an adaptation of the *general major* signed for students interested in taking the junior administrative examination for trance into local, state, or federal government service. It is also designed to prepare udents for graduate work in the field of Public Administration. Students planning enter graduate work in this field should consult with the adviser in Public Administration in planning the student program.

The outline of courses suggested below is for the purpose of guiding the student planning the *general major*. For further information on the *general major* refer the section entitled: Upper Division Requirements for the Bachelor of Arts Degree Arts and Sciences.

## Lower Division

*eshman Year*

| | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | – | 2 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Psychology 1, General, and 10, Advanced General | 3 | 3 |
| Geography 1, Elements (a natural science) | 3 | – |
| Foreign language (if not completed in high school) | 0–5 | 0–5 |
| Electives (see lower division requirements in natural science) | 1–6 | 3–5 |
| | 15½ | 16½ |

*phomore Year*

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Political Science 71A-71B, Introduction to American Government and Politics | 3 | 3 |
| Economics 1A-1B, Principles | 3 | 3 |
| History 17A-17B, History of American Civilization | 3 | 3 |
| Electives (to include Mathematics C, Intermediate Algebra, unless completed in high school; and completion of lower division requirements | 6 | 6 |
| | 15½ | 15½ |

## Upper Division

*nior Year*

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Political Science 140, Principles of Public Administration | 3 | – |
| Political Science 141, Organization and Procedure in Public Administration | – | 3 |
| Economics 131, Public Finance | – | 3 |
| Economics 140, Statistical Methods | 3 | – |
| Upper division social science courses to apply toward the third field for the general major, to be selected in consultation with adviser | 3 | 3 |
| Electives selected in consultation with adviser | 6 | 6 |
| | 15 | 15 |

*ior Year*

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Political Science 139A-139B, American Constitutional Development | 3 | 3 |
| Political Science 198, Special Studies in Government | 2–4 | – |
| Economics upper division elective, selected from list below | – | 3 |
| Upper division social science courses to apply toward the third field for the general major, to be selected in consultation with adviser | 3 | 3 |
| Upper division elective to complete minimum 40-unit upper division requiring for graduation | 2–3 | – |
| Electives selected in consultation with adviser | 3–5 | 6 |
| | 15 | 15 |

# RECREATION CURRICULUM

The curriculum in recreation is arranged under the plan of the general ma to provide a program to train for playground work, camp leadership, work with you groups, and related activities. See description of the general major in section entitle Upper Division Requirements for the Bachelor of Arts Degree in Arts and Scienc

## Lower Division

| | | Un |
|---|---|---|
| Health Education 21, Principles of Healthful Living | | 2 |
| Physical Education | | 7½- |
| Activity courses: 3 for men; 6 for women, selected from the following: 2A, 3A-3B, 4, 5, 6, 9, 11A, 13, 14. | | |
| Physical Education 44, Professional Activities (men) | 2 | |
| Physical Education 51, First Aid | 2 | |
| Physical Education 53, Physical Education for Elementary Schools | 2½ | |
| Social Science (to include Sociology 50A, Introduction, and 50B, General). See lower division requirements in social science | | 12 |
| Psychology 1, General, and 11, Applied | | 6 |
| Foreign Language (if 3 years not completed in high school) | | 10 |
| Natural Science (Physical Science 1A, Introduction, or Astronomy 1, Descriptive) and additional units selected from Biology 1, Survey, 10A-10B, General, Botany 4, California Plants, Geology 2A, General. (Include laboratory science if needed) | | 12 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | | 6 |
| Speech Arts 2A, Fundamentals of Public Speaking | | 3 |
| Elective | | 1- |
| Prepare for U. S. Constitution and American History graduation requirement. | | |
| | | 60 |

## Upper Division

| | | |
|---|---|---|
| General Major (see page 20) | | 36 |
| Sociology (minimum of 9 units; maximum of 15 units) | | |
| Sociology 106, Criminology and Penology | 3 | |
| *Sociology 107, Juvenile Delinquency | 3 | |
| Sociology 109, Fields of Social Work | 3 | |
| *Sociology 110, Race Relations | 3 | |
| *Sociology 195, Community Welfare Organization | 3 | |
| Sociology 197, Urban Sociology | 3 | |
| Physical Education (minimum of 9 units; maximum of 15 units) | | |
| Physical Education 145, Professional Activities (men) or 156A-156B (women) | 2 | |
| Physical Education 146, Professional Activities (men) or 161 (women) | 2 | |
| *Physical Education 165, Community Recreation | 3 | |
| *Physical Education 170, Recreational Leadership | 3 | |
| *Physical Education 199, Special Study in Recreation | 3 | |
| Select a third field for the general major from the following: speech arts, psychology, art, music, education, biological science (minimum of 9 units; maximum of 15 units) | | |
| Education 174 Audio-visual-radio Education | | 2 |
| Electives (including at least 2 units of upper division) | | 22 |
| | | 120 |

Consultation with an adviser in the Department of Physical Education is advis in selecting courses and fields of study for the general major.

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* These courses are required.

## PRE-SOCIAL WORK CURRICULUM

The professional curriculum in social service prepares for admission to graduate k in recognized American schools of social work. This curriculum should be pursued hose who plan careers in federal, state and local welfare work; social work in lic schools including preparation for a teaching credential; family and children's ate case work agencies; social settlement work; county probation work; child are agencies; statistical and investigational work in private and public agencies; k in public institutions for the defective and delinquent; medical social service and hiatric social work in hospitals and clinics; executive positions in social work; social work in numerous other organizations.

The lower division requirements of the arts and sciences curricula include the gen- requirements of recognized professional schools of social work and should therefore narily be met in full. The outline of courses below meets the requirements for the ral major. For description of the general major, refer to the section entitled: Upper ision Requirements for the Bachelor of Arts Degree in Arts and Sciences.

The following subjects should be completed in high school: elementary algebra, it; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language, 3 units ne language.

### Lower Division

*hman Year*

| | Units<br>*1st Sem.* | <br>*2d Sem.* |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Health Education 21, Principles of Healthful Living | – | 2 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Biology 10A-10B, General | 3 | 3 |
| Foreign Language (if needed to complete requirement) | 0–5 | 0–5 |
| Psychology 1, General, and 11, Applied | 3 | 3 |
| Electives (see natural science requirement, page 18)<br>(Also recommended: Speech Arts 2A-2B, Public Speaking) | 1–6 | 1–4 |
| | 15½ | 15½ |

*omore Year*

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Physical Education (activity courses) | ½ | ½ |
| Economics 1A-1B, Principles | 3 | 3 |
| Political Science 1A-1B, Introduction to Government, or 71A-71B, Introduction to American Government and Politics | 3 | 3 |
| Additional Natural Science (if needed to meet requirement) | 3 | – |
| Sociology 50A-50B, Introduction and General | 3 | 3 |
| Electives (anthropology recommended) | 3 | 6 |
| | 15½ | 15½ |

### Upper Division

*or Year*

| | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Economics 170, Government and Business, or 195, International Economic Relations | – | 3 |
| Sociology 103, Elementary Social Statistics | 3 | – |
| Sociology 109, Fields of Social Work | – | 3 |
| Psychology 150, Abnormal Psychology | 3 | – |
| Psychology 145, Social Psychology | – | 3 |
| Zoology 165, Human Heredity | 2 | – |
| Elective | 7 | 6 |
| Examination in U. S. Constitution and American History. | | |
| | 15 | 15 |

| *Senior Year* | *Units* *1st Sem.* |
|---|---|
| Economics 185, Social Insurance, or 150, Labor Problems | 3 |
| Sociology 197, Urban Sociology | 3 |
| Sociology upper division elective | – |
| Psychology 151, Introduction to Clinical Appraisal | 3 |
| Economics 102, Comparative Economic Systems, or 131, Public Finance | – |
| Political Science 140, Principles of Public Administration, and 141, Organization and Procedure in Public administration, or 143, Municipal and County Government, or upper division anthropology | 3 |
| Upper division elective (to complete minimum of 40 upper division units) | 2 |
| Additional upper division electives recommended | 1 |
|  | 15 |

## PRE-VETERINARY CURRICULUM

Most colleges of veterinary medicine require but one year (32 units) of veterinary college work. There are a few colleges which require two years and i best to consult the bulletin of the college to which admission is desired for spe requirements.

### Freshman Year

|  | *Units* *1st Sem.* | *2* *S* |
|---|---|---|
| Physical Education (activity courses) | ½ |  |
| Chemistry 1A-1B, General | 5 | 5 |
| Zoology 1A-1B, General | 4 | 4 |
| English 1, Freshman Composition, and 2, Freshman Literature, or optional course | 3 | 3 |
| Health Education 21, Principles of Healthful Living | 2 | – |
| Electives | 2 | 4 |
|  | 16½ | 16 |

### Sophomore Year

|  |  |  |
|---|---|---|
| Botany 2A-2B, General | 4 | 4 |
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Physical Measurements | 1 | 1 |
| Chemistry 101, Elementary Organic | 4 | – |
| Psychology 1, General | – | 3 |
| Social Science | 3 | 3 |
| Physical Education (activity courses) | ½ |  |
| Electives | 1 | 2 |
|  | 16½ | 16 |

Suggested electives are additional Mathematics, Foreign Language, Entomolog

# ANNOUNCEMENT OF COURSES

## COURSE NUMBERS

Courses numbered from 1 to 99 are lower division (freshman or sophomore) rses; those numbered 100 to 199 are upper division (junior or senior) courses; se numbered 200 to 299 are graduate courses (see section on Admission and Regis- tion for information concerning eligibility to enroll in these courses) ; those num- ed 300 to 399 are professional education courses to be taken at the graduate level.

## CREDIT FOR UPPER DIVISION COURSES

Freshmen are not admitted to upper division courses.

A sophomore may enroll in an upper division course for lower division credit vided he has earned an average grade of not less than 1.5 in all college work ertaken, and provided he receives the instructor's permission to enroll in the course.

A second semester sophomore may enroll in an upper division course for upper sion credit without the foregoing grade limitations provided the units earned in upper division course or courses are in excess of the 60 units required in the er division.

A student with sophomore standing may carry upper division courses for upper sion credit provided that he has the written approval of the chairman of the depart- nt and the Dean of Arts and Sciences or the Dean of Education.

## UNITS

Figures in parentheses indicate the unit value of the course.

One "unit" represents 50 minutes of recitation or lecture, together with the ired preparation, or three hours laboratory work each week for a semester of weeks.

## ORDER IN WHICH COURSES ARE OFFERED

The semester in which courses are offered is designated as follows: Fall (given all only) ; Spring (given in Spring only) ; Fall or Spring (given in either Fall pring) ; Fall and Spring (a year course beginning in either the Fall or Spring) ; r Course (beginning in Fall).

Either semester of a year course may be taken first unless otherwise designated.

Although the college fully expects to carry out the arrangements planned in the of courses, it reserves the right to make changes. Classes in which the enrollment not come up to the minimum number set by the State Department of Education not be offered or may be postponed.

## PREREQUISITES

Prerequisites for courses are stated. A student should not enroll in a course for h he is not eligible.

## PROVISIONAL COURSES

Courses numbered 40 to 45 are open only to students who are in the provisional ram. Other students (those not having provisional status) are not eligible to these courses.

# AESTHETICS

## IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is not offered in aesthetics; however, certain co in this field are required as part of the majors in art and in music. For specific info tion, refer to these departments.

A *teaching major* is not offered in aesthetics; however, certain courses in field are required as part of the teaching major in art and in music for the ge secondary and the special secondary credentials in these fields. For specific informa refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is not offered in aesthetics.

A *teaching minor* is not offered in aesthetics; however, certain courses in field are required as part of the teaching minor in art for the general secondary general junior high school, and the special secondary credentials. For specific info tion, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. Survey of Music**

Correlation of music and other arts. Designed to stimulate enjoyment of m by developing intelligent listening. The elements of music, its structure, folk mus all countries, musical instruments, and the contributions of the best known compo with some biographical study of these men. Compositions are presented by orthoph recording and by class members. Attendance at a number of local concerts is requ No previous musical training or background is necessary. Music majors are requ to complete additional assignments for full credit.

Year course (2-2)

**5. Art Orientation**

An illustrated lecture course dealing with aesthetic meaning and its rela to the structure of art products. Designed to increase both understanding and ap ciation of the visual world in general and of the fine arts in particular.

Spring (2)

**50. Appreciation and History of Art**

A survey of art development in the painting, sculpture, architecture, and ha crafts from dawn of art to the Renaissance. Illustrated.

Fall (2)

**51. Survey of Mexican Art**

A study of Mexican and Middle American Art from earliest time to present.

Fall (2)

**52A-52B. Survey of Oriental Art**

A study of the art of the great cultures of the Orient. (52A is a prerequi for 52B.)

Fall and Spring (3-3)

### Upper Division Courses

**100. Great Music**

A listening course designed especially for the layman and concert-goer. Mas pieces of instrumental and vocal music will be performed by means of recordings by local musicians. A study of artistic trends and their effect upon musical composi and performance. Correlation of musical art and other arts. No prerequisites. credit for music majors.

Summer (3)

**2A-102B. Music History**

The various movements in the development of music as related to the other arts. e chronological development of the art of music with particular emphasis on the ger works. Considerable attention is given to the works of modern composers. Many nphonic works are studied from the orchestral scores. Music majors are required to nplete additional assignments for full credit. Prerequisite: Aesthetics 1A or 1B.

Year course (2-2)

**1. Appreciation and History of Art**

The period from the Renaissance through the modern school treated in the same nner as in Aesthetics 50.

Spring (2)

## ANTHROPOLOGY

### IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is not offered in anthropology; however, upper ision units in anthropology may be planned under the *general major* program. Stunts wishing to use anthropology as a field of concentration in the *general major* uld include the following courses in the lower division: Anthropology 1A-1B, 2 or 3 Geography 1, 2; Geology 1A-1B; Psychology 1, 10 or 11; Sociology 50A-50B; ommended: Spanish, German, or French. The following fields of study are recomnded in the upper division in addition to anthropology with a view to later specialiion in anthropological work: for *archaeology*: art, geography, geology, and history; *physical anthropology*: psychology and zoology; for *museum work*: art, education, ology, and psychology. For further information on the *general major*, refer to the tion on Admission and Registration.

A *teaching major* is not offered in anthropology; however, it may be used as rt of the *social science major* for the general junior high school credential or the eral secondary credential. For specific information, refer to the outlines of the uirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in anthropology. The minor must include at st 15 units of work in anthropology, 9 units of which must be from courses carrying per division credit.

A *teaching minor* is not offered in anthropology for the general secondary crential; however, anthropology may be used as a part of the *social science minor* for general junior high school, the special secondary, the general elementary, and the dergarten-primary credentials. For specific information, refer to the requirements the teaching minor for these credentials.

**-1B. General Anthropology**

Origin and antiquity of man. Theories of human descent. Classification of races. gin and early development of civilization.

Year course (3-3)

**Physical Anthropology**

An introduction to the studies of primatology and anthropometry. The comparae anatomy of the monkeys and great apes, the emergence of the anthropoids, the onstruction of early man from fossil evidence. The landmarks, measures and indices d in the metrical study of the living human body and skeletal material. Sexual differes and growth changes in the skull and skeleton.

Fall (3)

**Survey of Archaeology**

A review of the history of modern archeology and a discussion of its methods. The elopment of archaeological techniques in reconstructing the ancient cultures of the diterranean world. The problems of present day archaeology in the Near East, the ent and the Americas. The principles and basic techniques used in the excavation of s and the reporting of findings.

Spring (3)

**54. Social Anthropology**

An anthropological study of social institutions in primitive and civilized societi The evolution of family organization, religion, property right, and government traced elementary and advanced civilization.

Spring (3)

## Upper Division Courses

**151A. The North American Indian**

Pre-Columbian cultures of the North American Indian. The origin and migrati of New World peoples. Industries, arts, crafts, social organization, religion and ot phases of American Indian civilization.

Fall (3) (Not offered in 1949-50)

**151B. Indian Civilization of Middle America**

The development of civilization in Pre-Columbian Mexico and Central Americ Aztec, Mayan, and related cultures.

Spring (3) (Not offered in 1949-50)

**152. World Ethnography**

The cultural patterns of representative aboriginal peoples. Industries, arts, soc organization and supernaturalism considered with a view to environmental adjustme historical development and functional interrelation. Ethnological theories reviewed a applied in interpreting illustrative aboriginal societies.

Fall (3)

**153. Primitive Religion**

Beliefs and ritual of primitive man. Magic and religion. Forms of animism a polytheism. Primitive mentality and the supernatural.

Spring (3)

**161. The California Indian**

A survey of native California Indian culture with stress on the Indian groups Southern California. The industries, arts, social organization, folklore and religi will be considered as revealed through the study of living peoples and archaeologic evidences.

Offered only during summer sessions (3)

**165. Ethnology and Race Psychology**

The biological basis of race, somatic and serologic typology, racial mentality, tes and their ethnopsychological significance, abnormality in ethnic groups. Race and cu ture; ethnic aspects of demography.

Fall (3) (Not offered in 1949-50)

**172. Indian Cultures of the Southwest**

Pueblo Indian culture of the Southwestern states and its background in the art crafts, architecture and religion of the past. The culture of contemporary Puebloa villages interpreted in terms of earlier civilizations revealed through archaeolog Recent trends in archaeological research reviewed.

Offered only during summer sessions (3)

# ART
## IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is offered in art. Every student who plans to major in t, whether under the liberal arts program or the teacher training program, should com- ete the following basic courses: Aesthetics 5 or 51, and 50, Art A-B, 6A-6B, and 14A. nder the liberal arts program the student majoring in art may choose either a group courses in which the crafts are emphasized or a group of courses in which the graphic ts are emphasized. One of the following plans should be selected:

Emphasis on crafts: The student should add to the list of basic courses required all art majors the following courses: lower division: Art 6D, 7, 11A-11B, and 61B; per division: Aesthetics 150, Art 106A or B or C, 106D, 117A-117B, 119A-119B, and nits of art electives. This program points in the direction of industrial design, inte- r design, cabinet making, sculpture, weaving, textile design, ceramics, etc.

Emphasis on graphic arts: The student should add to the list of basic courses quired of all art majors the following courses: lower division: Art 15A, 16A, and 4 its of art electives; upper division: Aesthetics 150, Art 106A, 112A-112B, 115A- 5B, 116A-116B, 117A, and 6 units of art electives. This program points in the direc- n of illustration, portraiture, landscape painting, mural design, poster design, pro- ction illustration, advertising design, fashion design, etc.

A *teaching major* in art is offered for the general secondary credential and the spe- l secondary credential. Students planning to teach art in the secondary schools should d to the list of basic courses required of all art majors the following courses: lower ision: Art 61A-61B, and 6 units of art electives; upper division: Aesthetics 150, t 116A, 112A, 106A, 119A, 195, and 6 units of art electives. Speech Arts 140A should o be completed. For further information, refer to the outlines of requirements for the ecial secondary and general secondary credentials.

### Minor

A *minor in arts and sciences* is offered in art. The minor must include at least 15 its of work in art, 9 units of which must be from courses carrying upper division edit.

A *teaching minor* is offered in art for the general secondary, the general junior h school, and the special secondary credentials. Art may be offered only as a second ching minor for the general elementary and the kindergarten-primary credentials. r specific information, refer to the outlines of requirements for these credentials.

### Art Appreciation, History and Orientation

For courses in appreciation, history of art, and art orientation, see aesthetics. ny students, regardless of the field in which they may be majoring, recognize the ed for an intelligent approach to the subject of art and art appreciation. However, e to the erroneous popular feeling that art is a subject requiring "talent", these stu nts may refrain from enrolling in art courses. For students who desire a better under- nding of art, but who do not hope to acquire any of the art skills, the following rses are recommended:

| | *Units* |
|---|---|
| Aesthetics 5, Art Orientation | 2 |
| Aesthetics 50, History and Appreciation of Art | 2 |
| Aesthetics 51, Survey of Mexican Art | 2 |
| Aesthetics 52A-52B, Survey of Oriental Art | 6 |
| Art 8, Costume and Home-furnishing | 2 |

Other courses which require certain skills but which are not beyond the ability the average college student are:

| | |
|---|---|
| Art 61B, Crafts | 2 |
| Art 6A, Design | 2 |
| Art A, Drawing and Composition | 2 |
| Art 94, Costume design | 2 |

## Lower Division Courses

### A. Drawing and Composition

Problems involving perspective to develop ability to draw still life, furnitur exteriors, interiors, and the like. (High school equivalent may excuse the student fro this course.)

Fall or Spring (2)

### Art B. Drawing and Composition

Drawing of mechanical and natural forms by the use of line and value. Emphas on proportion and structure. Some quick sketching, gesture and contour drawing. Pr requisite: Art A.

Fall or Spring (2)

### 6A. Design

Fundamentals of design and composition and theory of color. Basic course used a prerequisite for all advanced work.

Fall or Spring (2)

### 6B. Design

Original work in creative design and representation with special stress on moder tendencies. Prerequisite: Art 6A.

Fall or Spring (2)

### 6D. Design

Study of the principles of design through the making of furniture. Prerequ site: 6A.

Fall or Spring (2)

### 7. Line, Color and Display

The principles of line, color and arrangement applied to store and window di play. Study and observation of windows, color and materials used in display. Buildi models and practical problems in arranging colors, textures, and forms in windo to fit different kinds of merchandise.

Fall or Spring (2)

### 8. Costume and House Furnishings

An appreciative study of modern architecture and modern house furnishing with emphasis on the spirit of gracious living and an appreciative study of the moder dress with emphasis on suitability to the figure, the personality and the occasion.

Fall or Spring (2)

### 11A. Industrial Design

Design of objects for manufacture with reference to their use, materials, a in accordance with factory practices and machine techniques. Prerequisite: Art 6 6B, A.

Fall (2)

### 11B. Advanced Industrial Design

Advanced problems with particular attention to the techniques of presentation-working drawings, renderings in perspective and scale models. Prerequisite: Art 6 6B, A, 11A.

Spring (2)

### 14A. Lettering

Fundamental art principles applied to lettering. Practice for quick, accura lettering; original problems using letters as design. Prerequisite: Art 6A.

Fall (2)

### 14B. Posters and Commercial Art

The application of lettering to posters, newspaper and magazine advertisin and other forms of commercial art. The study of composition combined with lette ing and special study of modern tendencies in publicity. Prerequisites: Art 6A, 14

Spring (2)

**5A-15B. Life Drawing**

Drawing from the nude model. Prerequisite: Art A-B.
Fall and Spring (2-2)

**5A-16B. Painting**

Semester I: Composition of still life in oil. Semester II: Landscape and more dvanced composition in oil. Prerequisite: Art A-B.
Fall and Spring (2-2)

**7A-17B. Sculpture**

Creative design in such materials as clay, wood, stone, concrete, etc. Prerequites: Art 6A-6B.
Fall and Spring (2-2)

**A. Crafts in the Elementary Schools**

A foundation course which develops unification of work of the elementary grades rough activities and experiences. These experiences grow out of environmental tivities. They include study and working of clay, lumber and tools, textiles, and rdboard construction. Prerequisite: Art 6A.
Fall or Spring (2)

**B. Crafts**

Problems involving the application of design principles to various fields—pottery, xtiles, weaving, metal work, wood-carving, and book-binding. Prerequisite: Art 6A.
Fall or Spring (2)

**A-94B. Costume Design**

Original designs of modern costumes suitable to the individual or to distinct pes; the drawing of fashion figures; the rendering of fabrics and textures. Prerequite: Art 6A.
Fall and Spring (2-2)

**A-95B. Interior Decoration** (See Art 195A-195B)

## Upper Division Courses

**6A-106B. Printmaking**

Study of print crafts which includes the making of linoleum blocks, wood engravgs, etchings and lithographs. Prerequisites: Art A, B, 6A.
Fall and Spring (2-2)

**6C. Illustration**

Same as 106A-B except that printmaking is applied to problems of book illustion. Prerequisites: Art A, B, 6A.
Spring (2)

**6D. Advanced Furniture Design**

(See Art 6D) Prerequisite: Art 6D.
Fall or Spring (2)

**2A-112B. Design and Composition**

Imaginative organization of space by means of color, dark and light, perspective, d textures of various materials. Prerequisites: Art A-B, 6A-6B.
Year course (2-2)

**5A-115B. Life Drawing and Painting**

Drawing and painting from nude and costume models. Prerequisite: Art A-B.
Fall and Spring (2-2)

**5C-115D. Advanced Life Drawing and Painting**

Painting from nude and costume models and advanced composition in oil. Portiture. Prerequisite: Art 115A-115B.
Fall and Spring (2-2)

**116A-116B. Advanced Painting**

Painting in oils from still life and landscape, stressing composition. Prerequis Art 16A or 16B.
Fall and Spring (2-2)

**117A-117B. Sculpture**

Creative design in such materials as clay, wood, stone, concrete, etc. Prere sites: Art 6A-6B and 17A or 17B.
Fall and Spring (2-2)

**119A. Ceramics**

Building of pottery on the basic techniques of coil, slab, mold making, and casting. Ceramic sculpture, glazing and kiln operations. Prerequisite: Art 6A.
Fall (2)

**119B. Ceramics**

Study of glazes and elementary clay technology. Mold making, slip casting application to individual creative problems. Prerequisite: Art 119A.
Spring (2)

**166. Special Studies**

A student with the necessary grade point average may apply for work i upper division art course and register for Art 166, Special Studies. (See page

**194A-194B. Costume Design** (For description, see Art 94A-94B)

Prerequisite: Art 6A and consent of instructor.
Fall and Spring (2-2)

**195A-195B. Interior Design**

The consideration of the house as a unit; the arrangement of garden, h floor plan, and furniture as functional and decorative problems. Prerequisite: A and 6A. 195A is a prerequisite for 195B.
Fall and Spring (2-2)

## Graduate Courses

**200A-200B. Special Problems**

A graduate course in which students may carry out projects in various fiel art under the direction of faculty members who are specialists in the field ch Students registering for this course must apply for work within a certain field discussions with the art faculty. Prerequisite: Graduate standing and conse instructor.
Fall and Spring (2-2)

# ASTRONOMY

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is not offered in astronomy. Students desiring to pre-
re for advanced work in astronomy should include the following courses: Astronomy
2, 3, 9, and 10; Mathematics 3A-3B, 4A-4B; Physics 1A-1B-1C-1D or 4A-4B-4C; a
ading knowledge of French and German.

A *teaching major* is not offered in astronomy; however, astronomy may be used
part of the general science major for the general junior high school credential. For
ecific information, refer to the outline of requirements for the general science teach-
g major for this credential.

### Minor

A *minor in arts and sciences* is not offered in astronomy.

A *teaching minor* is not offered in astronomy; however, astronomy may be used
part of the *general science minor* for the general junior high school, the special
condary, the general elementary, and the kindergarten-primary credentials. For
ecific information, refer to the requirements of the teaching minor for these
edentials.

### Lower Division Courses

**Descriptive Astronomy**

A cultural course planned to develop an appreciation of astronomy with special
phasis on the solar system. Only calculations of an elementary nature are used.
special attention is given to the methods and instruments by means of which astro-
mical knowledge has been gained. A six-inch John Byrne refractor and an eight-inch
flecting telescope are available for observation. Prerequisites: Elementary algebra
d plane geometry.

Fall and Spring (3)

**Modern Astronomy**

A study of the stellar system in the light of modern research, especially photo-
aphic and spectrographic. Prerequisite: Astronomy 1 or permission of the instructor.

Spring (3)

**Surveyor's Course in Practical Astronomy**

The principles of spherical astronomy adapted to the needs of engineering stu-
nts. Computation and observation. Two lectures and one three hour laboratory period
ch week. Prerequisite: Surveying 1A or permission of the instructor. Astronomy 1
d 9 desirable.

Spring (3)

**Practice in Observing**

A laboratory course designed particularly to go along with and to supplement
stronomy 1. The course will include constellation study, use of astronomical coordi-
tes, elementary methods of determining time and latitude, and descriptive observa-
ons of celestial objects with the six-inch telescope. One three hour evening laboratory
riod each week. Prerequisite: Astronomy 1 or registration in Astronomy 1 or permis-
on of the instructor.

Fall or Spring (1)

**Advanced Observational Astronomy**

A continuation of Astronomy 9. More advanced problems in observing will be
ken up such as the determination of azimuth by observations of Polaris, transit
servations, astronomical photography, etc. One three hour evening laboratory period
ch week. Prerequisites: Astronomy 1 and 9.

Spring (or upon demand) (1)

**12. Elementary Navigation**

A study of compass corrections, drift problems, time, line of position, use celestial coordinates, Bowditch Tables, etc. A few class hours at the close of th term are devoted to the use of tables such as Ageton, Dreisonstok and H. O. 214 for th solution of astronomical triangle. One three hour laboratory period each wee Offered if demand is sufficient. Prerequisite: Astronomy 1 or permission of instructo
Fall (3) (Offered in 1948-1949)

### Upper Division Courses

**100. Special Problems**

Admission by consent of instructor. Credit and hours to be arranged in each cas Open to students who have completed three units in astronomy.
Fall or Spring (1 or 2)

**105. Historic Development of Astronomy**

A study of the more important problems and astronomical concepts in the lig of their historical development. Particular attention is given to the biography an contributions of the more important astronomers, such as, Galileo, Kepler, Newto Herschel, Bessel, etc.
Fall (3) (Not offered 1949-50)

**107. Method of Least Squares and Computing Practices**

Fundamental principles with applications in the fields of astronomy, physic and engineering.
Spring (3) (Not offered in 1949-50)

## BACTERIOLOGY

### IN THE DIVISION OF LIFE SCIENCES

*Majors* and *Minors* are not offered in bacteriology; however, courses in this fiel may be used as part of the liberal arts major in zoology. Courses in this field ar recommended for students who are preparing to teach science in junior high schoo or life sciences in high school.

### Lower Division Courses

**1. General Bacteriology**

An introduction to bacteriology. Effects of physical and chemical agencies upo bacteria; biochemical activities of bacteria; microscopic examination and cultivatio of bacteria; the bacteria of air, water, soil, milk and dairy products, other foods industrial applications. Introduction to disease-producing bacteria. Two hours of lectur and six hours of laboratory per week. Prerequisite: Chemistry 1A or 2A.
Fall or Spring (4)

### Upper Division Courses

**101. General Bacteriology**

Lectures and laboratory work of Bacteriology 1 with additional work to be prescribed by the instructor. Prerequisite: Chemistry 1A or 2A.
Fall or Spring (4)

**102. Advanced Bacteriology**

This course deals with the cultural characteristics of the common pathogens and the serological reactions of the body to them. The course is planned primarily for those students interested in medical technology and clinical laboratory technique. Two lectures and two laboratory periods per week. Prerequisites: Bacteriology 101 and Chemistry 1A-1B or equivalent. Recommended: Organic Chemistry.
Fall (4)

**199. Special Problems**

Work other than is outlined in the regular courses. Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least 15 units of work in the life sciences (including courses in Bacteriology) with grades of A or B.
Fall or Spring (1 or 2)

## BIOLOGY

### IN THE DIVISION OF LIFE SCIENCES

#### Major

A *major in arts and sciences* is not offered in biology; however, courses in biology nay be used as part of the *life science major in arts and sciences.* Refer to the descripion of the *life science major* in the section entitled: Upper Division Requirements for he Bachelor of Arts Degree in Arts and Sciences.

A *teaching major* is not offered in biology; however, Biology 10A-10B may be ısed for the year course required in a biological science for the *general science major* or the general junior high school credential or the *physical science major* for the ;eneral secondary credential. For specific information, refer to the outlines of requirenents for these credentials.

#### Minor

A *minor* is not offered in biology; however, biology may be used as part of the *general science minor* for the general junior high school and special secondary redentials. For specific information, refer to the outlines of requirements for the eaching minor for these credentials.

#### Lower Division Courses

**A. Solutions and Dosage**

Arithmetic review with computing of dosage, percentage of solutions, apothecaries veights. Two hours per week.

Fall (2)

**. Survey of Biology**

A survey of life science, stressing the development of modern concepts in the ields of plant and animal science, bacteriology, genetics, and physiology. Emphasis s placed on the relationships of biology to modern life and the application of scientific ınalysis to every day problems. Three lectures and one hour of demonstration and liscussion per week. Not open to students with credit for Biology 40, 10A, 10B, Zoology 1A, 1B, Botany 2A, or 2B.

Fall or Spring (3)

**10A-10B. General Biology**

A year course in life science, more extensive than "Biology 1." Continues hroughout the year and includes a three-hour laboratory period, and two hours of ectures per week. Designed for those who do not expect to specialize in zoology or otany; not open to students with credit for Biology 1, 40, Zoology 1A, 1B, Botany A, or 2B. Biology 10A is a prerequisite for 10B. Students who have taken 10A-10B nay elect Zoology 1B or Botany 2A or 2B for credit.

Year course (3-3)

## BOTANY

### IN THE DIVISION OF LIFE SCIENCES

#### Major

A *major in arts and sciences* is not offered in botany; however, courses in this field nay be used as part of the *zoology major in arts and sciences*, or as part of the *life cience major in arts and sciences.* Refer to the description of the *life science major* in he section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

Students who are preparing for advanced work in botany should include the ollowing courses: Botany 2A-2B, 104; Chemistry 1A-1B, 101. Recommended: French, German, and elementary courses in other biological sciences.

A *teaching major* is not offered in botany; however, botany may be used as part of the *general science major* for the general junior high school credential or as part of the *life science major* for the general secondary credential. For specific information, efer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in botany. The minor must include at lea 15 units of work in botany, 9 units of which must be from courses carrying upper div sion credit.

A *teaching minor* is not offered in botany; however, botany may be used as pa of the *general science minor* for the general junior high, the special secondary, t general elementary, and the kindergarten-primary credentials or as part of the *li science minor* for the general secondary credential. For specific information, refer the outlines of requirements for these credentials.

### Lower Division Courses

**2A-2B. General Botany**

A year course covering the fundamentals of structure and general behavior seed plants, the morphology and relationship of the lower plants, including an intr duction to classification and distribution of seed plants. Two lectures and six hours laboratory work per week. Botany 2A is a prerequisite to 2B.
Year course (4-4)

**4. California Plants**

Classification and ecology of representative orders of wild flowers, trees, an chaparral of the San Diego region, including practice in the use of keys. One lectur and three hours laboratory per week. Occasional Saturday field trips.
Spring (2)

### Upper Division Courses

**101. Plant Pathology**

A practical course dealing with the principles of disease in plants, contro measures, and quarantine procedures. Of particular interest to students of agriculture forestry and horticulture. Emphasis is placed on the determination and control measures of those pathogenic organisms which affect truck and field crops, garden an ornamental trees and shrubs and nursery stock. Two lectures and one laborator period per week. Prerequisite: Botany 2A-2B.
Fall (3)

**102. Plant Geography**

Lectures and field work on the principles of geographical distribution of plants Prerequisite: Botany 2A-2B, or 4, or equivalent.
Fall (2) (Offered in 1948-49 and alternate years)

**104. Plant Taxonomy**

Identification, classification and distribution of representative orders of flowering plants. One hour lecture and six hours per week of laboratory and field work. Prerequisites: Botany 2A-2B, or 4.
Spring (3) (Offered in 1947-48 and alternate years)

**105. Cultivated Trees and Shrubs**

Recognition of the common cultivated trees and shrubs of the San Diego region. Trips to local parks and private gardens. One lecture and three hours per week laboratory or field work.
Fall (2)

**107. Plant Physiology**

The activities of plants, including food manufacture, absorption, conduction, transpiration, respiration, growth and movement. Two lectures and two laboratory periods per week. Prerequisites: Biology 10A-10B or Botany 2A, and Chemistry 2A-2B or equivalent.
Spring (4)

**123. Economic Biology**

Study of the uses of plants and animals to man and the ways in which they injure him and his possessions. Consideration is also given to general methods of control and conservation. Prerequisite: Zoology 1A, Biology 1, or Biology 10B. Not open to students who have credit in Zoology 123.

### 4. Scientific Illustration

Drawing and photography of scientific subjects. Students are assigned indi- dual projects, following their respective inclinations. It is desirable for students ecting this course to have a definite project, or projects in mind and to confer with e instructor in advance in case specialized needs are required. Six hours of labora- ry work per week. Not open to students who have credit in Zoology 124.

Fall (2)

### 0. Readings in Biology

Reading from a suggested bibliography with informal class discussion of topics. ıbjects discussed will include history of biology, biological principles, ecology, onomic zoology, zoogeography, breeding habits, and animal behavior. Not open to udents who have credit in Zoology 130.

Spring (2)

### 5. Genetics

An introductory course to the principles of heredity and cytogenetics, including e genetics of man, other animals and plants. Designed primarily for science majors. wo lectures per week. Not open to students who have taken Zoology 155 or 165. erequisite: Biology 10A-10B, Zoology 1A-1B, or Botany 2A-2B.

Spring (2)

### 9. Special Problems

Work other than is outlined in the above courses. Admission by consent of the structor with whom the work is to be done. Credit and hours to be arranged in ch case. Open only to students who have completed at least fifteen units of Botany th a grade A or B.

Fall and Spring (1 or 2)

## CHEMISTRY

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in chemistry. Two plans are provided: One students expecting to enter chemistry as professional chemists; the other for idents intending to use chemistry in a related field. In addition, varying degrees of ncentration in chemistry are available in the teaching major in physical science and the chemical engineering option of the engineering major.

A *teaching major* is offered in chemistry for the general secondary credential or part of the *general science major* for the general junior high school credential or as rt of the *physical science major* for the general secondary credential. For specific ormation, refer to the outlines of the requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in chemistry. The minor must include emistry 1A-1B plus at least 9 units of credit in upper division chemistry courses.

A *teaching minor* is offered in chemistry for the general secondary credential or part of the *general science minor* for the general junior high, the special secondary, general elementary, and the kindergarten-primary credentials. For specific infor- tion, refer to the outlines of the requirements for these credentials.

### Curricula for Chemistry Majors in Arts and Sciences

Plan A, outlined below, is recommended for all students who intend to become ofessional chemists. It follows the recommendations of the Committee on Professional aining of the American Chemical Society. It qualifies graduates for many types of sitions as chemists and provides the training required by most universities for nission to graduate work in chemistry.

Plan B is designed for students who do not intend to become professional mists, but who desire the major in chemistry as part of a general education or in paration for training in a related profession. By proper choice of electives, gradu- s can meet the requirements for admittance to medical schools. This plan is also suitable for students interested in teaching in secondary schools who desire m intensive chemical training than that required in the physical science major.

The recommended sequence of courses for each plan is presented below. courses except electives are required. The foreign language requirement may be by courses taken in high school plus an examination to demonstrate competence reading. Some variation in sequence is permissible with the consent of the fac adviser.

### Plan A
### (For chemists)

| First year | Units |
|---|---|
| Chemistry 1A-1B | 5–5 |
| † Physics 4A | 0–4 |
| Mathematics 3A-3B | 3–3 |
| English 1 and 2 | 3–3 |
| Psychology 1 | 3–0 |
| Health Education 21 | 2–0 |
| Physical Education | ½–½ |
| | 16½–15½ |

| Second year | Units |
|---|---|
| Chemistry 5 | 3–0 |
| Chemistry 101 | 0–4 |
| Physics 1C-1D or 4B-4C | 3–4 3–4 |
| Mathematics 4A-4B | 3–3 |
| German A-B | 5–5 |
| Physical Education | ½–½ |
| | 14½–15½ 15½–16½ |

| Third year | Units |
|---|---|
| Chemistry 102-103 | 3–3 |
| Chemistry 110A-110B | 3–3 |
| Chemistry 105 | 0–3 3–0 |
| Minor | 3–0 0–3 |
| Social Science | 6–6 |
| | 15–15 |

| Fourth year | Units |
|---|---|
| Chemistry 111 | 3–0 |
| Chemistry elective | 0–2 |
| Minor | 3–3 |
| Electives | 9–10 |
| | 15–15 |

### Plan B
### (For related professions)

| First year | U |
|---|---|
| Chemistry 1A-1B | 5– |
| Physics 2A-2B | 3– |
| Physics 3A-3B | 1– |
| Mathematics 7A-7B | 3– |
| English 1 and 2 | 3– |
| Physical Education | ½- |
| | 15½–1 |

| Second year | U |
|---|---|
| Chemistry 5 | 3– |
| Chemistry 101 | 0– |
| French or German A-B | 5– |
| Health Education 21 | 2– |
| Psychology 1 | 0– |
| * Elective | 6– |
| Physical Education | ½- |
| | 16½–1 |

| Third year | U |
|---|---|
| Chemistry 102-103 | 3- |
| Chemistry 110A-110B | 3- |
| Chemistry 105 | 3–0 0- |
| Minor | 0–3 3- |
| Social Science | 6- |
| | 15- |

| Fourth year | U |
|---|---|
| Chemistry elective | 3- |
| Minor | 3- |
| Electives | 9- |
| | 15- |

## Lower Division Courses

### 1A-1B. General Chemistry

The general principles of chemistry, and a description of the elements and th common compounds. Three lectures and two laboratory periods per week. The labo tory work in the second semester consists of work in qualitative analysis. Prerequisit Two years of high school mathematics. Recommended: High school chemistry, physi and additional mathematics. Chemistry 1A is a prerequisite for Chemistry 1B. O 2 units of credit per semester will be allowed to students who have credit for Chemis 2A-2B.

Year course (5-5)

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* Should include preparation for minor.

† The physics sequence, 1A-1B-1C-1D, formerly offered, will fulfill the requi ment of Physics 4A-4B-4C for students who started physics before Septe ber, 1949.

### A-2B. Fundamentals of Chemistry

A general course for those not intending to take advanced courses in chemistry. e work in the first semester stresses inorganic chemistry and fundamental principles; at of the second semester covers an introduction to organic chemistry and biochem- ry. Emphasis is placed on applications of chemistry to everyday life. Two lectures and e laboratory period per week. Required of prenursing students and recommended for ose desiring chemistry as part of a liberal education. Not open for credit to students o have credit in Chemistry 1A-1B.

Year course (3-3)

### Elementary Quantitative Analysis

The principles of gravimetric and volumetric analysis. Discussions of the theory quantitative analysis and practice in the standardization of reagents and the analysis samples. One lecture and quiz, and two laboratory periods per week. Prerequisite: emistry 1A-1B.

Fall or Spring (3)

### 1. Elementary Organic Chemistry

An introductory study of the chemistry of carbon compounds, both aliphatic and omatic. The laboratory work illustrates properties and reactions of typical compounds d stresses development of technique. Three lectures and one laboratory period per ek. Prerequisite: Chemistry 1A-1B.

Fall or Spring (4)

### 2. Organic Chemistry Laboratory

Synthesis of typical aliphatic and aromatic compounds. Study of the theory and actice of laboratory distillation, crystallization and related operations. Approxi- tely the last third of the work covers an introduction to the systematic qualitative alysis of organic compounds by group reactions and individual tests. Three labora- y periods per week. Prerequisite: Chemistry 101.

Fall or Spring (3)

### Intermediate Organic Chemistry

A continuation of Chemistry 101. Further study of types of aliphatic and aro- tic compounds, their derivatives and interrelationship. Introduction to mechanisms organic reactions. Three lectures per week. Prerequisite: Credit or registration in emistry 102.

Spring (3)

### Advanced Quantitative Analysis

Advanced work in the theory and practice of volumetric, gravimetric, and electro- alysis. One lecture, one quiz, and two laboratory periods per week. Prerequisite: emistry 5.

Fall or Spring (3)

### A-110B. Physical Chemistry

Theoretical principles of chemistry, with emphasis on mathematical relations. e class will be divided into Sections A and B. Students with credit or registration in thematics 4B will be admitted to Section A; others to Section B. In Section B the hematical treatment of some topics will be less rigorous and discussions will include re descriptive material than in Section A. Three lectures per week, problems and orts. Prerequisites: Chemistry 1A-1B; Physics 1A-1B-1C-1D or 4A-4B-4C or 2B-3A-3B; and Mathematics 4B (or Mathematics 7B) and credit or registration hemistry 101. Chemistry 110A is a prerequisite for Chemistry 110B.

Year course (3-3)

### Physical Chemistry Laboratory

Physico-chemical apparatus and measurements. Discussion period and three lab- tory periods per week. Prerequisite: Credit or registration in Section A of Chem- y 110A.

Spring (3)

### 114. Biochemistry

The chemistry of fats, carbohydrates, proteins, vitamins, hormones and enzyme Chemotherapy, nutrition, digestion and intermediary metabolism are discussed. Thr lectures per week. Prerequisite: Chemistry 103. Recommended: Elementary biolog or zoology.

Fall (3)

### 115. Biochemistry Laboratory

Laboratory work in the synthesis, isolation and analysis of biochemical material Chemical rather than biological considerations are emphasized. Two laboratory perio per week. Prerequisites: Chemistry 5, 102, 103 and credit or registration in Chemistry 114.

Spring (2)

### 118. Colloid Chemistry

The theoretical principles of colloid chemistry and the preparation, properti and practical applications of colloids. Two lectures per week. Prerequisite: Chemistr 101, 110A and 110B.

Fall (2)

### 122. Glass Blowing

Elementary training in the manipulation of glass. Prerequisite: Chemistry 1A-1 One laboratory period per week.

Fall (1)

### 127. Advanced Inorganic Chemistry

A lecture course dealing with such topics as the physical basis of the periodi system, complex inorganic compounds, and the nature of the chemical bond. Three le tures per week. Prerequisite: Chemistry 1A-1B. Recommended Chemistry 110A-110

Spring (3)

### 144A-144B. Principles of Chemical Engineering

Industrial stoichiometry, flow of fluids, heat transfer, unit processes and types industrial equipment. Three lectures per week, problems and reports. Prerequisite Credit or registration in Chemistry 110A. Chemistry 144A is a prerequisite for Chemistry 144B.

Year course (3-3)

### 155. Instrumental Methods of Analysis

Training in the theory and manipulation of instruments used in modern chemic and physical testing laboratories. Discussions, laboratory work and field trips. Tw laboratory periods per week. Prerequisite: Chemistry 5.

Fall (2)

### 199. Special Problems

Supervised individual work in specialized branches of chemistry. Admission onl by the consent of the instructor. Hours of credit to be arranged in each case. Open onl to students who have shown ability to do A or B work in chemistry.

Fall and Spring (1-2)

## Graduate Courses

### 200. Seminar

Intensive study of some phase of advanced chemistry under the direction of member of the staff. Each student will choose a topic from one of the following field for study and will prepare and present a paper on this topic to the staff members an other seminar students.

A. Advanced Organic Chemistry
B. Chemical Kinetics
C. Chemical Thermodynamics
D. Molecular Structure
E. Electrochemistry
F. Advanced Biochemistry
G. Spectrographic Analysis

Prerequisite: Graduate standing with suitable background in chemistry and consen of the instructor. Maximum credit 4 units.

Fall and Spring (2-2)

**99. Special Problems**

Individual work on some topic in advanced chemistry and preparation of formal ritten report. Problem selected to develop familiarity with chemical literature and search techniques. Prerequisite: Graduate standing with suitable background in emistry and consent of the instructor. Maximum credit 3 units.

Fall or Spring (1-3)

## COMMERCE

### IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in commerce with concentration in one of e following sub-fields: (A) Accounting, (B) Banking and Finance, (C) Business dministration, (D) Marketing, (E) Secretarial. In addition to meeting the general wer division requirements for all students (except the foreign language requireent), the following courses are required of commerce majors in the lower division: conomics 1A-1B; Commerce 2 (not required in Marketing or Secretarial sub-fields. tudents in the Secretarial sub-field are required to take 1A-1B and 5A-5B), 14A-14B students in the Secretarial sub-field take 16A-16B instead), 18A-18B; Geography 1, eography 10 or equivalent (not required of students in the Marketing sub-field); nglish 8 and 2. Students in the Marketing sub-field must also include Commerce 20, 4, 25, 27, and Art 7.

Upper division requirements: A minimum of 24 upper division units. The folwing courses must be included for students majoring in (A) Accounting, (B) Bankg and Finance, (C) Business Administration, and (D) Marketing: Economics 111 r 170 or Commerce 123; Economics 140; Commerce 121; and 15 units selected from ne of the following sub-fields:

a. *Accounting:* Commerce 160A-160B, 161A-161B, 162, 164A-164B, 165A-165B.
b. *Banking and Finance:* Commerce 133, 134, 137; Economics 131, 135, 142.
c. *Business Administration:* Commerce 123, 125, 126, 127A, 133, 134, 137, 153, 184; Economics 128, 150, 142, 170.
d. *Marketing:* Commerce 123, 124, (students who wish to specialize in insurance may elect 127B, 128A, 128B), 137, 153, 184, 185, 186, 187A, 187B, 188, 189; Home Economics 160A-160B.

Students majoring in the *Secretarial* sub-field must include the following courses: Commerce 103A-103B, 113A-113B, 123, 153, 164A, and 9 units of directed electives, with approval of departmental representative, chosen from the following courses: Commerce 121, 186, 188, Economics 111, 135, 142, 150, or 170.

For a complete outline of the curriculum in commerce, refer to the section ntitled: Preprofessional and Vocational Curricula.

A *teaching major* is not offered in commerce; however, certain courses in this eld are required as part of the *teaching major in business education* for the general condary credential and the special secondary credential in business education. For ecific information, refer to the outlines of the requirements for these credentials.

### Minor

A *Minor in arts and sciences* is offered in commerce. Lower division requirements: ommerce 14A-14B; Economics 1A-1B. Upper division requirements: 9 units of upper ivision commerce courses selected from one group as outlined above under the major. tudents who elect the marketing group must complete Commerce 24 and 25 or 27 in e lower division.

A *teaching minor* is not offered in commerce; however, certain courses in this eld are required as part of the *teaching minor in business education* for the general condary, the general junior high school, or the special secondary credential. For ecific information, refer to the outlines of requirements for these credentials.

## Partial Credit Courses

When a student has had high school credit in typing or shorthand, partial colle credit will be allowed for completion of courses as follows:

| *High school credit received for:* | *College units allowed as follows:* Com. 1A | Com. 1B | Com. 2A | Com. 5A | Com. 5B |
|---|---|---|---|---|---|
| ½ year typing | 1½ | 3 | ½ | – | – |
| 1 year typing | 0 | 3 | 0 | – | – |
| 1½ years typing | 0 | 1½ | 0 | – | – |
| 2 years typing | 0 | 0 | 0 | – | – |
| ½ year shorthand | – | – | – | 3½ | 5 |
| 1 year shorthand | – | – | – | 2 | 5 |
| 1½ years shorthand | – | – | – | ½ | 5 |
| 2 years shorthand | – | – | – | 0 | 4 |

## Lower Division Courses

Note: Courses in commerce may not be used to meet any part of the low division social science requirement, nor may they be used as part of a social scien major or minor.

### A. Business Mathematics

A practical course in the mathematics of business. A thorough study of intere compound interest, discount, insurance rates, etc.
Fall or Spring (1)

### 1A-1B. Typewriting

A rapid development of a thorough command of a keyboard by the touch metho The acquisition of speed and the artistic arrangement of typewritten material wi special reference to commercial forms, tabulation and billing; specifications, leg forms, and preparation of manuscripts; transcription, mimeographing, etc. Seve hours lecture and laboratory practice. (1A is a prerequisite for 1B.)
Year course (3-3)

### 2. Mathematics of Finance

Interest and annuities; amortization; sinking funds; valuation of bonds; depr ciation; mathematics of building and loan associations; mathematics of life insuranc Prerequisites: Two years of algebra in high school, or equivalents.
Fall or Spring (3)

### 2A. Typewriting

A short course designed for those not wishing to enter the business office bu desiring a knowledge of the use of the typewriter. Five hours laboratory practice.
Fall or Spring (3)

### 3A. Office Procedure

Practice and principles of office management, including organization, arrang ment and operation. Study and use of modern office appliances such as the multigrapl mimeograph, filing devices, calculating and bookkeeping machines. Prerequisite: Com merce 1A or its equivalent.
Fall or Spring (3)

### 5A-5B. Shorthand

An intensive course designed for the practical preparation of office secretaries A thorough study of the Gregg System. Development of the ability to read and writ shorthand rapidly and correctly, both literary and commercial. The shorthand spee necessary to pass a civil service examination is attained by the end of the year. (5A i a prerequisite for 5B.)
Year course (5-5)

### 6A-6B. Advanced Shorthand

Development of speed in writing and transcription. Advanced dictation on lette forms, legal forms, speeches, and literary and technical material. Prerequisite: Com merce 5A-5B or equivalent. (6A is a prerequisite for 6B.)
Year course (3-3)

### glish in Business (See English 8)

### A-14B. Principles of Accounting

A knowledge of bookkeeping not required and not advantageous. The balance
et; profit and loss statement; various types of books of original entry; the opening,
nducting, and closing of books for different kinds of businesses; organizations, reor-
nizations, dissolutions, and consolidations, etc., keeping in view the best modern
ounting practice. Five hours lecture and laboratory. (14A is a prerequisite for 14B.)
Year course (3-3)

### A-16B. Secretarial Accounting

A course in secretarial accounting covering the fundamental principles of
ounting and the application of those principles to the accounting work done by
lege graduate secretaries and teachers of business education. Required for four-
r secretarial and business education majors. (16A is a prerequisite for 16B.)
Year course (3-3)

### A-18B. Commercial Law

The leading and fundamental principles of business law. Simple cases showing
actual application of the principles to commercial and business transactions, rather
n the development of those principles. The subjects covered: contracts, sales,
ncy, negotiable instruments, insurance, and wills, with a brief study of evidence.
her semester may be taken first.
Fall and Spring (3-3)

### Consumer Problems

Consumer incomes; bases of consumer choice-making; practical problems of
ing food, clothing, shelter, transportation, insurance, etc.; family budgeting;
rket structure and functions seen from the consumer's point of view; importance
the business man of an understanding of the consumers' needs and problems.
Fall (3)

### Organization and Management of Small Business

A course dealing with the problems confronting the small business man with
ard to finance, organization, management.
(3)

### Merchandising

A study of retail stores, emphasizing the problems of store managers and mer-
ndising executives; store location, organization, personnel, sales promotion, buying
l handling of merchandise, inventory, turnover, and control methods. Changing
ditions in retailing, problems of profitable operation under present conditions.
Spring or Fall (3)

### Salesmanship

Theoretical and psychological backgrounds of salesmanship, newer concepts of
ing; the selling of ideas and services; steps in a sale: attention, interest, desire,
sing; the development of clienteles and of good will; the personal factor in sales-
nship.
Spring or Fall (3)

### Applied Salesmanship

Classroom practice in selling; supervised work in cooperating stores, or outside
ing; relationships between theory and practice in specific selling situations; incen-
e methods of payment in selling; the problem of sales managers in reducing selling
ts. Prerequisite: Commerce 25 and consent of instructor.
Spring (2)

### Advertising Principles

A study of advertising as a sales promotional tool in our modern marketing
ivities, dealing with the organization of the advertising industry; consumer, market
product analysis; advertising media; preparation of advertisements; measurement
dvertising effectiveness; economic and legal aspects of advertising; public rela-
ns; advertising campaigns.
Fall or Spring (3)

**65A-65B. Record Keeping**

A course in the application of accounting practice and principles to accounti practice; the technical arrangement of accounting forms, records and reports fou in business. Opportunity afforded students through the use of practice sets, etc., secure practice in applying principles to actual work done in business. Prerequisit Commerce 14A-14B or 16A-16B. Commerce 65A is a prerequisite for 65B.

Year course (1 to 3 each semester)

**103A. Office Management**

A study of the general functions of the office, the duties of the office manag the organization of the office including record keeping and the efficient use of calc lating and other similar equipment. Two hours lecture and 3 hours laboratory p week. Not open to students who have credit for Commerce 3A.

Fall or Spring (3)

**103B. Office Management**

A study of the organization, direction and improvement of the communicati functions and records of the office together with a study of improvement in the us of dictating machines, duplicating machines and filing techniques. Two hours of lectu and 3 hours of laboratory per week. Not open to students who have credit for Co merce 3A. Prerequisite: Commerce 1A or its equivalent.

Fall or Spring (3)

**113A-113B. Secretarial Office Practice**

Practice in the duties and routines of office work as required of the stenograph and secretary with special emphasis on the shorthand dictation and transcripti problems arising in various types of offices. Prerequisite: Commerce 1A-1B, 5A-5B, their equivalent.

Year course (5-5)

**118A-118B. Advanced Commercial Law**

An advanced study of the law of personal and real property, partnership, co poration and the laws regulating trade and trade practices and competition. Electi for commerce majors.

Fall and Spring (3-3)

**121. Business Administration**

Problems of business administration as an interrelated whole and as an indicati of lines of study which may lead to the solution of those problems. A discussion of tl problems of the business administrator with particular reference to the character of tl problems involved and to the control policies and devices of the manager. Question problems, and case studies. Prerequisite: Economics 1A-1B.

Fall or Spring (3)

**123. Marketing Principles**

A general survey of the field of marketing covering such topics as the place marketing in our economic structure; consumer demand in relation to the marketin machinery; marketing functions; marketing activities of producers, wholesaler retailers and other middlemen; channels of distribution; integration of marketin activities; price policies; government regulation; analysis of marketing costs, efi ciency and trends. Prerequisite: Economics 1A-1B or Commerce 45A-45B if earne with grades of A or B.

Fall or Spring (3)

**124. Marketing Administration**

An advanced course dealing with all the phases of marketing utilized in mos distributive campaigns. Basic marketing principles are applied to the solutions practical problems faced by producers, wholesalers, retailers and other middleme in the marketing of their products. Problems covered include adaptation of product to meet consumer demand; selection of channels of distribution; brand policy; sale promotion; price determination; operating control; legislative regulation of prices diagnosis marketing policies. Prerequisite: Commerce 123.

Spring (3)

**5. General Insurance**

Economic theory of risk, its extent and importance to both the individual and siness; transfer of risk; distribution and prevention of loss; types of insurance rriers; problems of rate making; the insurance contract; coverages; special forms life, fire, marine and casualty insurance; state supervision.

Fall (3)

**6. Casualty Insurance**

The nature and reasons for existing practices in compensation and casualty surance. The social and legal bases of insurance, fundamental principles of rate aking, policy provisions, state regulation and state insurance.

Spring (3)

**7A. Life Insurance—Principles and Practice**

A study of social and individual values involved in the institution of life insur- ce. The student is then directed to the types of life insurance companies and asso- ations, home office and agency organization, types of contracts, surrender value, policy ans and extended insurance, surplus and dividend policies, reserves, group, industrial d social insurance, and state supervision.

Fall (3)

**7B. Life Insurance Salesmanship**

A study of the special problems of life insurance selling, with emphasis on the ychological aspects of insurance selling, and on specific techniques for finding pros- cts, and for managing the sales interview. A course for students interested in life surance selling, and for those planning to obtain life underwriter's certification.

Spring (3)

**8A-128B. Advanced Life Insurance**

An advanced course in life insurance. The emphasis is on preparation for the L. U. Certificate. 128A is a prerequisite for 128B.

Year course (3-3)

**3. Corporation Finance**

The corporate form of organization, instruments of long-time finance, methods of ising capital, efficient financial management, the financing of reorganizations, and vernmental control. Prerequisite: Economics 1A-1B. Not open to students who have edit for Economics 133.

Fall (3)

**4. Investments**

Investment principles and practices with emphasis upon problems of the small vestor, such as tests of a good investment, sources of information, types of stocks and nds, mechanics of purchase and sale, investment trusts, real estate mortgages, and e like.

Spring (3)

**7. Credits and Collections**

The credit man and his work, including the instruments with which he works, urces of credit information, the technique of his department, collection methods, islation for the protection of debtor and creditor, and credit insurance.

Fall (3)

**3. Personnel Administration**

Problems in the management of personnel relations, including techniques of ecting, training, supervising and rating employees. Methods used by management job evaluation; wage and salary payment plans; employee services; health and ety; union relationships; stimulation of interest; control of turnover and absentee- n, etc. Case studies of personnel department procedures in local business and gov- nmental organizations.

Fall or Spring (4)

### 160A-160B. Advanced Accounting

An intensive study of the corporation, its accounting and financial problems thorough study of the balance sheet; depreciation; factory accounting, etc. P requisite: Commerce 14A-14B. (160A is a prerequisite for 160B.)

Year course (3-3) (Offered in 1948-49 and alternate years)

### 160C. Advanced Accounting

An intensive study of consolidated statements, consolidations, mergers a financing, foreign exchange, estates and trusts, budgets, public accounts, bank accour brokerage.

Summer (3)

### 161A-161B. Cost Accounting

Principles and methods of cost accounting in the mercantile establishment a in the factory. A study of bookkeeping procedure, the forms used, and their ap cation to practical problems. 161A is a prerequisite for 161B.

Year course (3-3)

### 162. Accounting Systems

The accounting systems used in various types of business and financial concer Some practice in devising and installing systems. Prerequisite: Commerce 14A-14

Fall (3)

### 164A-164B. Income Tax Procedure

A consideration of the problems arising from state and federal income, inheritar and corporation tax. The problems are approached from the point of view of the ta payer who desires to determine the exact application of the law to the interests represents as well as from the accounting point of view. 164A is a prerequisite for 164

Year course (3-3)

### 165A-165B. Auditing

The fundamental principles of accepted procedures of auditing and related typ of accounting engagements. 165A is a prerequisite for 165B.

Year course (3-3)

### 167. Governmental Accounting

A comparative study of accounting systems used by municipalities, counties, a the State of California; detailed comparisons with commercial practice; procedures handling budget accounts, appropriations, and encumbrances; subsidiary records; co records; internal checks; auditing.

Spring (3)

### 184. Sales Management

Consideration of the problems confronting the modern sales executive. Attenti is given to the development of methods of handling internal and external phases of t work of sales departments, including such topics as sales organization; selection, trai ing, compensation and control of the sales force; sales analysis and planning; sal quotas; sales costs and budgets; market and product research and analysis; coordin tion of personal selling with other form of sales effort.

(3)

### 185. Advertising Copy and Layout

Introduction to principles and techniques of copy writing; selection and prese tation of appeals; types of copy for various types of products, advertisers and medi preparation of layouts; mechanical methods employed by the artist, engraver ar printer to give effective interpretation of the idea; legislation and regulations affecti advertising claims. Prerequisite: Commerce 27, or permission of instructor.

(2)

**36. Store Management Problems**

Locations, buildings, layouts and fixtures; store supplies and maintenance; eceiving, marking, storing, wrapping and delivering merchandise; customer service, djustments, credit and collections; expense control; case studies in store operating roblems. Prerequisite: Commerce 24, or permission of instructor.

(2)

**37A. Buying Techniques**

Buying as a career; merchandising organization in department and specialty ores and chains; customer demand; determination of what to buy; functional bureaus at aid in buying; model stock plans; merchandise resources; foreign buying; trading chniques; terms and discounts; credit and shipping terms; legal aspects or ordering; rands and labels; the regulation of trade practices; case studies in buying problems. 'rerequisite: Commerce 24, or permission of instructor.

(2)

**37B. Merchandising Techniques**

A study of the merchandising operations of retail stores; exclusive of buying unctions. Special attention to methods of dollar and unit control; pricing, turnover, iventory methods and control; legislation affecting merchandising methods and prices; erchandise budgets; arithmetic of merchandising; and studies of profitability of speific methods of merchandising. Case studies will be made by students, covering varius aspects of merchandise operations in local stores. Prerequisite: Commerce 24, or ermission of instructor.

(2)

**38. Advertising Media**

A thorough coverage of advertising media, including newspapers, magazines, farm apers, business papers, direct advertising, sign advertising, radio advertising and varius miscellaneous types of media, considered from the point of view of large and small dvertisers in a variety of business situations. Special topics include market characteristics; rates and sources of information; evaluation of media; problems of coverage, uplication, costs and scheduling; advertising salesmanship. Prerequisite: Comerce 27, or permission of instructor.

(2)

**39. Advertising Problems**

Principles of advertising are applied to the solution of actual advertising probems encountered by business firms. Topics covered include: estimating opportunities r effective use of advertising; building effective promotional campaigns; selection of edia; retail advertising, national advertising, advertising agencies; advertising serves of publishers. Throughout the course emphasis is upon advertising as a sales prootional tool, viewed from the administrative point of view. Prerequisite: Comerce 27, or permission of instructor.

(3)

**98A-198B. Investigation and Report**

A comprehensive and an original study of a problem connected with business nder the direction of one or more members of the commerce staff. Prerequisite: Senior tanding and consent of the instructor. 198A is a prerequisite for 198B.

(1 to 3 each semester)

## Graduate Courses

**03. Secretarial Administration**

An intensive study of the problems of office management and their solution. The elation of records, reports, budgets and manuals to managerial control. Prerequisite: ommerce 3A, Commerce 14A-14B, 121, and graduate standing.

(2)

**213. Problems in Business Education**

Designed to fit the needs of individual students and their problems through t writing of research papers, of a term or individual study nature. The studies to be ma will cover the principles of good teaching, trends in Business Education, current lit ature, and similar problems. Prerequisite: Graduate standing.
Spring (2)

**223. Problems of Distributive Business**

Critical Analysis of distributive business problems in the light of changing ec nomic, social and governmental conditions. Prerequisite: Commerce 121, 123, and gra uate standing.
(2)

**233. Administration and Supervision of Business Education**

Designed to provide students who hold, or who expect to hold, administrative pos tions in Business Education with the techniques necessary for successful executi work. Topics considered: In-service training, hiring, promotion, research, classroo organization, tests and measurement, guidance, supervision, classroom materials ar equipment, and extra-curricular activities. Prerequisite: Graduate standing.
Fall (2)

**260. Advanced Problem Analysis (Accounting)**

The study of conditions causing various accounting problems with speci emphasis upon the theory and practices involved in their solution. Prerequisit Commerce 160A-160B, 161, 165, and graduate standing.
(2)

# COMPARATIVE LITERATURE

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is not offered in comparative literature; however, urses in this field may be used as part of the English major in arts and sciences. For ecific information, refer to English.

A *teaching major* is not offered in comparative literature; however, courses in is field may be used as part of the teaching major in English for the general secondary d general junior high school credentials with the approval of the departmental repre- ntative. For specific information, refer to the outlines of requirements for these edentials.

### Minor

A *minor in arts and sciences* is offered in comparative literature. The minor must clude at least 15 units of work in comparative literature, 9 units of which must be om courses carrying upper division credit.

A *teaching minor* is not offered in comparative literature; however, courses in is field may be used as part of the teaching minor in English for the general sec- dary, the general junior high school, the special secondary, the general elementary, d the kindergarten-primary credentials. For specific information, refer to the out- nes of requirements for these credentials.

### Lower Division Courses

**2A-52B. Masterpieces of World Literature**

A chronological survey from Homer to modern times. The first semester stresses e classical epic and tragedy. The second semester, beginning with the Renaissance, resses prose fiction, the drama, and the essay.

Year course (3-3)

### Upper Division Courses

**1A. Modern Continental Fiction**

A survey of leading French, Russian, Scandinavian, Italian, and German novel- ts and short story writers, from Tolstoy and his associates to the present day.

Spring (3)

**4A-104B. Spanish American Literature**

For a description of this course, see Spanish 104A-104B, which may be taken for edit in Comparative Literature by doing the required reading in English translation.

Year course (3-3)

**5. The Bible as Literature**

A study of the narrative, poetry, and prophecy of the King James version of the ible. Readings, reports, lectures, and discussions.

Fall (3)

**0A-140B. Masterpieces of French Literature**

A cultural course designed to be given in introduction to the great French works om the Song of Roland through Cyrano de Bergerac, with emphasis on the 16th, 17th, 8th and 19th century authors. The contributions to world thinking of Rabelais, Mon- igne, Moliere, Racine, Descartes, Pascal, Montesquieu, Voltaire, Rousseau, Hugo, alzac, Flaubert, Maupassant, Zola, will be studied through lectures and outside adings.

Year course (3-3) (Offered in 1949-1950 and alternate years)

**2A-152B. Survey of Drama**

Study of selected tragedies and comedies from Asiatic, European, English, and merican literature, with emphasis upon the human problems depicted therein and pon the timelessness of certain themes, such as those of Electra and Medea. Lectures, iscussions, and reports on readings.

Year course (3-3)

**155. Literature of the Continental Renaissance**

Development of Renaissance literature in western and southern Europe. Studi in the works of Dante, Petrarch, Ariosto, Tasso, Erasmus, Calvin, Cervantes, Ral lais, Montaigne, and other significant authors.
Spring (3)

**158. Classicism in European Literature**

Aims, ideals, themes, influences, literary manners and methods of the period classicism in European literatures, particularly that of France. Studies in the writin of Moliere, Racine, Descartes, Boileau, Montesquieu, Voltaire and others.
Fall (3) (Offered in 1949-1950 and alternate years)

**159. The Rise of Romanticism in European Literature**

Continental origins and growth of the romantic movement. Studies in the worl of Rousseau, Goethe, Schiller, Lessing, Chateaubriand, Mme. de Stael, and others.
Spring (3)

**199. Special Problems**

Students who have demonstrated ability in literary studies may enroll for wo other than is outlined in the regular courses. Admission only by consent of the instru tor with whom the work is to be done.
Fall or Spring (1-3)

# ECONOMICS

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in economics. Lower division requirements:
conomics 1A-1B; Commerce 14A-14B; and at least one year sequence of 6 units from
e following groups: Political Science 1A-1B, or 71A-71B; History 4A-4B, or 8A-8B,
17A-17B; Psychology 1 and 10; Sociology 50A-50B; or Anthropology 1A-1B. Rec-
nmended: Commerce 18A-18B; Geography 1, 10; Mathematics C. Upper division
quirements: a minimum of 24 upper division units including Economics 100A, 140,
d 18 additional units in economics. A maximum of 6 of the additional units may be
osen from courses in a related field with the approval of the departmental repre-
ntative.

A *teaching major* is offered in economics for the general secondary credential
as part of the *social science major* for the general junior high school credential
the general secondary credential. For specific information, refer to the outlines
requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in economics. The minor must include at
ast 15 units of work in economics, 9 units of which must be from courses carrying
pper division credit.

A *teaching minor* is offered in economics for the general secondary credential,
r as part of the *social science minor* for the general junior high school, the special
econdary, the general elementary, and the kindergarten-primary credentials. For
ecific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**A-1B. Principles of Economics**

The basic principles of economics: utility, wealth, value, price; economic pro-
uction, distribution, and consumption; rent, interest, wages, and profit; competition,
onopoly, and large scale production; property, economic waste, and luxury; money
nd banking, international trade and tariffs; transportation corporations, labor prob-
ms, socialism, taxation, etc. Aims of the course: (1) to provide a foundation for
rther intensive study of economic problems; (2) to furnish to those who expect to
llow business pursuits a broad foundation in economic principles; and (3) to intro-
uce future citizens to political and economic problems of our time. Lectures, discus-
ons, quizzes, and collateral reading. Not open to entering freshmen except by special
rrangement. (1A is a prerequisite for 1B.)

Year course (3-3)

### Upper Division Courses

**00A. Modern Economic Thought**

Advanced economic theory with special reference to value and distribution.
pecial attention is given to marginal utility theory, and to the contribution of modern
conomic thought. Prerequisite: Economics 1A-1B.

Fall or Spring (3)

**00B. Modern Economic Thought**

Essentially a continuation of 100A, with emphasis on the income approach,
mployment, and the Keynesian analysis. Prerequisite: Economics 1A-1B. (Comple-
on of Economics 100A recommended, but not a prerequisite for 100B.)

Spring (3)

**02. Comparative Economic Systems**

A study of the economic aspects of laissez-faire and regulated capitalism, social-
m, communism, Nazism, Fascism. Comparative experience in Russia, Germany, the
nited States, Great Britain. Criteria for evaluating economic systems. Positions of
he individual and government in each system. Planning in a liberal capitalism society.
ooperatives.

Spring (3)

### 110. Economic History of Europe

A general survey of economic development from the Middle Ages to the presen Particular attention is given to the impact of the Industrial Revolution on nation economics, particularly on England's commerce and industry.

Fall (3)

### 111. Economic History of the United States

A comprehensive survey of American economic development and of nation legislation in the field of industry and commerce.

Spring (3)

### 128. Land Economics

Real estate in all its aspects: property rights, transfer of title, valuation, financ selling, property management, taxation, insurance, city planning, and the like, wit special emphasis upon problems as they exist in San Diego. Prerequisite: Economi 1A-1B.

Fall (3)

### 131. Public Finance

Principles and practices of taxation and public expenditures. Economic effect of public spending, debts and taxation. Financing social security and other service Fiscal policy and prosperity. Relation to inflation and deflation. Special emphasi on social problems involved.

Spring (3)

### 133. Corporation Finance

The corporate form of organization; instruments of long-time finance; method of raising capital, efficient financial management, financing of reorganizations, an government control. Not open to students who have had Commerce 133.

Fall and Spring (3)

### 135. Money and Banking

The elements of monetary theory. History and principles of banking with specia reference to the banking system of the United States. Prerequisite: Economics 1A-1B

Spring (3)

### 140. Statistical Methods

The nature and uses of statistical method in the social sciences. Practice i tabular and graphic presentation of data; analysis of frequency and time series index number construction and study of correlation techniques. Prerequisite: Mathematics A-B, and C or equivalent. Not open to students with credit for Sociology 10 or Psychology 104A or 104B.

Fall or Spring (3)

### 142. Business Cycles

Fundamental factors in business cycles are analyzed and cycle theories ar examined. Study of current business conditions begins early in the course and develop into practical application of forecasting methods to both business and other data Prerequisite: Economics 1A-1B.

Spring (3)

### 150. Labor Problems

A study of labor organizations and their policies, wages, strikes, unemployment social insurance, child labor, labor legislation, plans for industrial peace, and other labor problems.

Fall (3)

### 151. Principles of Labor Legislation

Federal, state and local laws and regulations concerning labor problems, industrial relations, and governmental policies with respect to labor; important court decisions; the make-up and functions of commissions and boards; labor union attitudes with respect to legislation and the courts.

Spring (3)

**0. Government and Business**

General survey of governmental activities affecting business; the state as an trepreneur and manager; governmental assistance to business; governmental regu- tion of business in its historical, legal and economic aspects, including recent devel- ments in the United States and abroad; proposed policies.
Fall (3)

**1. Transportation**

The development of railway transportation; railroad financing; rates and rate aking; governmental regulation; government operation of railroads during the war; cent development of motor and air transportation. Prerequisite: Economics 1A-1B.
Fall (3)

**2. Public Utilities**

The growth of public utilities in the United States; economics of public utility tes; valuation; public regulation and its legal basis; public ownership. Prerequisite: onomics 1A-1B.
Spring (3)

**5. Social Insurance**

The need for social security and attempts to meet these needs through social surance and other devices, including old age pensions, health insurance, unemploy- ent insurance, and Social Security Act. Strength and weakness of existing systems. eed for extension; proposals.
Fall (3)

**0. Principles of Foreign Trade**

National welfare and foreign trade. Principle of comparative costs, comparative vantages in various nations. Foreign exchange and the balance of payments, financing eign trade. Regulations over trade and obstructing factors. Techniques of exporting d importing. Doctrines of international trade.
Fall (3)

**5. International Economic Relations**

Important aspects of international cooperation and conflict in the economic here, conditions essential to future cooperation. The quest for foreign markets, raw terials, investment opportunities and population outlets. Commercial policies, inter- tional economic conferences and organizations. Colonial rivalries and postwar oblems.
Spring (3)

**3. Investigation and Report**

Designed to stimulate independent study and investigation; to furnish guidance the collection, organization, and presentation of factual material; to improve the hnique of term reports. For economics majors only.
Fall and Spring (3-3)

**A-199B. Special Study**

Designed exclusively for seniors with a major in economics.
Fall (1), Spring (1 or 2)

## Graduate Courses

**A-200B. Seminar in Modern Economic Thought**

A critical study of contemporary economic thought to provide a clearer under- nding of major economic problems of the day. Prerequisite: Graduate standing and nsent of the instructor.
Fall and Spring (2-2)

# EDUCATION

## IN THE DIVISION OF EDUCATION

### Major

A *major in arts and sciences* is not offered in education ; however, education i
major for the general elementary and kindergarten-primary credentials. For speci
information, refer to the requirements for these credentials.

A *teaching major* is offered in education for the general elementary and kind
garten-primary credentials.

### Minor

A *minor in arts and sciences* is offered in education. This minor consists of
minimum of 15 upper division units in education selected from Education 102A-102
102C-102D, 115A-115B with the approval of the Dean of Professional Education.

A *teaching minor* is not offered in education.

### Lower Division Courses

A. Review of Arithmetic
H. Review of Handwriting
R. Review of Reading
S. Review of Spelling

Each of the Review courses is a noncredit course designed to increase competen
in the skill subjects. Diagnosis of individual student difficulties will be made follow
by directed practice and evaluation of progress. Open only to students who do n
qualify on the respective sections of the Fundamentals Test required of all applica
to teacher education.

Fall or Spring (0)

**50. The School and Society**

A nonprofessional survey of education designed to acquaint the student with t
school as a social institution in American life. Lectures will be given by differe
instructors who will lead discussion periods on the various topics. Students majori
in education should consult the instructor.

Fall or Spring (2)

### Upper Division Courses

**100B. Methods and Materials of Instruction and Audio-visual Aids**

A series of professional courses in specific teaching fields designed to be tak
just prior to or concurrently with the first directed teaching assignment. Each cou
emphasizes the application of principles of best practice with reference to motivati
individual differences, audio-visual aids, evaluation and the achievement of an effecti
learning situation in the major and minor subject fields.

Subject fields for sections in 100B are as follows:

100B-A, Methods in Art
100B-B, Methods in Accounting
100B-BE, Objectives and Curricula in Business Education
100B-E, Methods in English
100B-L, Methods in Romance Language
100B-MA, Methods in Mathematics
100B-ME, Methods in Merchandising
100B-MU, Methods in Music
100B-PE, Methods in Phys. Ed. (Men)
100B-PE, Methods in Phys. Ed. (Women)
100B-SC, Methods in Science
100B-S, Methods in Shorthand
100B-SA, Methods in Speech Arts
100B-S.SC, Methods in Social Sci.
100B-SS, Methods in Secretarial Subjects
100B-T, Methods in Typing
Fall (3) [Major (2)] [Minor (1)]

### 2A. Measurement and Evaluation in Elementary Education

A course required of all students preparing for an elementary teaching credential. deals with the use of tests in the diagnosis and improvement of learning; con- uction of objective examinations; problems of evaluation in education; and the ments of statistical techniques.

Fall or Spring (3)

### 2B. Child Growth and Development

The course deals with a study of the mental, emotional, social, and physical elopment during childhood and early adolescence. Directed observation required. t open for credit to students who have credit for Psychology 102, 106, or Home onomics 102.

Fall or Spring (3)

### 2C. Growth and Development of the Adolescent

A course to improve understanding of the adolescent's physiological, psycho- ical, social, and emotional development. Field work with adolescent groups in the nmunity is required. To be taken during the junior year. Not open for credit to dents who have credit in Psychology 103 or 106.

Fall or Spring (3)

### 2D. Measurement and Evaluation in Secondary Education

This course deals with problems of evaluation in secondary education, construc- n of examinations, the elements of statistics, the selection and interpretation of ndardized measures. Field work required.

Fall or Spring (2)

### A. Methods in Teaching Americanization Classes

Methods used in teaching the various grade levels found in Americanization sses, beginners, intermediates, and advanced, as well as those preparing for their uralization, will be discussed. The course includes discussion of new skills and hnics, devices, and short cuts in learning to speak, read, and write English; aids in anizing and conducting classes; and in helping teachers to understand backgrounds foreign born.

Extension (2)

### A. History and Philosophy of Education

Historical backgrounds and underlying philosophies upon which the public ool system has been established. Emphasis will be placed on the meaning of educa- n, educational aims and values, and democracy and education. Prerequisite: Senior nding or the equivalent.

Fall or Spring (2)

### B. Secondary Education

This course will serve as an introduction to understanding the development of ondary education and its present status as a social institution. The topics developed l include: curriculum; teaching methods; organization and administration; guid- e; and objectives. Field work required. To be taken during the junior year.

Fall or Spring (3)

### . Directed Teaching

Systematic observation, participation and teaching under supervision in the pus elementary school, the affiliated elementary, junior high and senior high ools. During each semester of student teaching in the secondary schools a weekly ference period is required as indicated in the time schedule.

The general plan is for elementary school credential candidates to take, following education practicums, a half-day of teaching daily for one semester in the campus mentary school or in one of the affiliated elementary schools. Junior high school special secondary school credential candidates will be guided by their adviser ative to the distribution of their student teaching. For those seeking a combination credentials, the requirements for each teaching level must be satisfied. Further rmation regarding this requirement should be requested of the Dean of Professional cation when the student first registers for directed teaching.

Thirty clock hours of student teaching will usually carry one unit of credit in t course, but the final amount of credit allowed will depend upon the character a quality of the teaching done by the student. Student teaching requirements may reduced for those who furnish evidence of successful public school experience.

The maximum amount of credit allowed for student teaching is 12 units.

The universities usually reduce the amount of student teaching credit they w allow to four units. Students planning to transfer to such institutions should prepared to meet this reduction with an equal number of acceptable units in otl courses.

No grade below "C" is acceptable for credit in student teaching.

Prerequisites: Completion of 75 units of college work; admission to teach education; a C average in all college work and in the work of the preceding semeste three units of work in psychology; a minimum of one semester's work in this colle No credit will be given unless the student registers in advance for this course in t office of the Dean of Education.

Fall or Spring (a maximum of 12 units )

### 117A. Elementary Music Education

Objectives of music teaching in the elementary school. Study of the child voi Organization of song material by grades. Procedure in presenting rote songs, ear trai ing, elementary notation, music reading, and part singing. Conducting. Prerequisit Music 1A, or the equivalent. Not open to students who have had Music 7A.

Fall or Spring (2)

### 117B. Methods in Instrumental Music

A study of the theory of problems or organizing and conducting school ban and orchestras, and the selection of materials. Provides practical experience in co ducting a children's orchestra and teaching sectional groups. A study of systema planning of courses of study for pupils of various ages and abilities will be made.

Fall or Spring (2)

### 119. Art in the Elementary School

Discussion of the elements and principles of art and their place in the a expression and appreciation of the elementary school child. Lectures illustrated wi examples of children's work and opportunity given for experience with media us in elementary school problems. Not open to students taking the elementary credenti Prerequisite: Art 6A.

Fall or Spring (2)

### 122. Social Studies in the Elementary School

A study of the nature and purpose, scope, organization and instructional pr cedures in the social studies in the elementary school. Opportunity will be given f the development of curriculum units and the analysis of teaching materials. The su mer course provides observation in the demonstration school.

Fall or Spring (2)

### 123. Science in Elementary Education

A laboratory course designed to assist teachers in developing a science progra related to the elementary curriculum. Study will be made of the following topic Objectives of elementary science, the relation of science experiences to instruction units in the social sciences, the construction and use of equipment, the effective u of audio-visual aids, the use of environmental resources, and the use of texts a supplementary material. Each student in the course will participate in the preparatio demonstration, and evaluation of typical science experiments.

Fall or Spring (3)

### 125. Curriculum in Elementary Education

A systematic survey of the following elementary subject areas: The langua arts, mathematics, music, science, and the social sciences. Emphasis will be plac upon the selection of content, teaching methods, and materials as they relate to soci needs, psychological principles, and the nature of the learner.

Fall or Spring (3)

### 6. Literature in Elementary Education

An introduction to children's literature at all levels of the elementary school. nsideration will be given to the following topics: Criteria for the selection of chil- n's literature, children's reading interests, children's literature and the develop- nt of units of instruction in the social studies, the use of the verse choir, dramatic adings and similar procedures, and the use of the library. Each student in the course ll have an opportunity to read widely in the field.

Fall or Spring (3)

### Arithmetic in Elementary Education

A course for teachers of arithmetic in the elementary and junior high school. aphasis is placed upon the understanding of the systems of notation and language hniques. Opportunity will be given for the development of instructional materials d procedures.

Fall or Spring (2)

### Educational Psychology

A study of the science of human behavior as it relates to learning. Emphasis is en to the principles of learning and the nature of the learner. Some of the areas ated are the growth of meanings, thinking, memory and habit formation, motiva- n, transfer of learning, organic and environmental conditions affecting learning, lividual differences, and the theory of audio-visual-radio education. Observation and d work required. Prerequisite: Psychology 1. Not open to students with credit for ychology 130.

Fall or Spring (2)

### Reading in Elementary Education

A systematic study of the reading process. Emphasis will be placed on reading a thinking process. Consideration will be given to topics such as: Scientifically eloped procedures for determining reading readiness, beginning reading, inde- ndence in work recognition, vocabulary development, word analysis, standards of ainment, types of reading programs, and the selection, preparation and use of ding materials. Analysis will be made of individual and group learning problems oughout all levels of the elementary school.

Fall or Spring (3)

### Adult Education

A study of the aims and scope of adult education and its function as a part of public school system. Individual and group work will be emphasized. Admission permission of the instructor.

Fall or Spring (3)

### Diagnosis and Remedial Treatment of Difficulties in Reading

A study of the causes of reading difficulties and the procedures for diagnosis l remedial treatment. Students will be expected to do practical work with children o have reading difficulty. The work is designed primarily for principals, supervisors l teachers-in-service. Prerequisite: Education 102B or Education 102A, or one r of successful teaching experience.

Fall or Spring (3)

### Organization and Administration of Music Education

Theory of the general principles of music administration; correlation of music h the various subjects in the public schools; music tests; creative work.

Fall or Spring (2)

### Education Practicum (Kindergarten-Primary)

This course is a continuation of Education 148 and will accompany Education in the kindergarten. A study of the theory of early childhood education providing erience with children of nursery school and kindergarten ages. Prerequisite: Educa- n 147, 148.

Fall or Spring (4)

### 146B. Interpretation of Early Childhood Behavior

A course for kindergarten-primary teachers emphasizing the analysis and int- pretation of early childhood behavior. Emphasis will be placed on understanding a interpreting the causative factors in typical behavior of children to parents, soc workers, teachers, and others concerned with the guidance of kindergarten-prim children.

Summer (3)

### 147. Education Practicum

This course is required of all students who expect to receive a credential wh will qualify them to teach in the kindergarten or in the elementary school. Stude should take the course during the next semester after admission to Teacher Educati which is usually the first semester of the junior year. Registration is strictly limi to those who have been approved by the Committee on Admission to Teacher E cation.

The content of the Education Practicums include both classroom participati (directed teaching) and the study of the principles of education. Education Practic is a unified course which deals with the interpretation and intelligent application theory and practice in elementary education. The child and accumulated knowle are studied as one affects the other. The psychology of learning is interpreted wh the college student is immediately associated with children in the process of learni Daily classes are held in which the psychology and philosophy of education are stud and analyzed as systems of knowledge and concurrently interpreted in reference the actual teaching participation to which the student is assigned for one hour dai The course includes Reading and Elementary School Methods (3) ; Elementary Education (1) ; Elementary Music Education (1) ; Language Arts (2) ; Arithme (3). Audio-Visual-Radio Instruction is integrated with the course, equivalent to units.

The course is taught by college teachers who supervise in the Campus Elementa School, and other faculty members.

Fall or Spring (10)

### 148. Education Practicum

This course is a continuation of Education 147 and is required of all stude who are candidates for the general elementary credential or the kindergarten-prima credential. An extended analysis is made of the psychology of education in vari fields and application is made through directed teaching in grades 4 to 6. The cou includes Elementary Social Studies (1) ; Elementary Science Education (1) ; E mentary Art Education (1) ; Elementary Music Education (1) ; Education Psych ogy (learning process and theory of audio-visual education) (2) ; additional 4 un for General Elementary only: Curriculum in Elementary Education (2) ; Direc Teaching (2) ; Audio-Visual-Radio Instruction (0). Prerequisite: Education 147.

Fall or Spring (12)

### 149A. Laboratory in Elementary Education

A general course in observation and theory, including a study of arithmet reading, language, music, science, social studies, art, spelling. Students in this cou will observe in the summer demonstration school and discuss with the staff the teachi procedures.

Summer only (3)

### 149C. Laboratory in Rural Education

Observation in a one-room multigraded summer demonstration school. Stude will observe demonstrations, discuss procedures with the staff, and prepare mater for their own schools.

Summer only (6)

### 149D. Workshop in Elementary Education

A workshop laboratory experience designed to meet the needs of individual groups of teachers who desire to study selected problems in elementary educati Discussions, individual consultations, projects, expert assistance, the utilization varied library and laboratory facilities, and the observation of classroom teaching w be provided for members in attendance. Interested persons should correspond with t Director of Elementary Education, San Diego State College.

Summer (3 or 6)

### 15. Principles of Guidance

A study of the basic principles of guidance and their function in the educational cess.

Fall or Spring (3)

### 16. Guidance Conference

A series of lecture and discussion sessions centering on current problems in counsing and guidance. Designed to serve the needs of teachers, administrators, counsors, personnel workers, and others desiring to keep informed of developments in this ea. Admission upon permission of the director of this conference.

Summer only (1)

### 1. Supervision of Child Welfare and Attendance

Content includes laws relating to children, guidance principles, social case work, ency relationships, conference techniques, home visitation methods, employment ervision, attendance work, child accounting, familiarity with testing techniques.

Summer (3)

### 1. Legal Aspects of Education

A study of the school law of California, important court decisions, rulings of t California State Superintendent of Public Instruction and the Attorney General, torical and current trends, and comparative data from throughout the United tes.

Fall or Spring (3)

### 1. Audio-visual-radio Education

A study of audio-visual-radio aids as they affect learning. Analysis and development of materials of instruction and their presentation; operation of equipment.

Fall or Spring (2)

### 1BE. Audio-visual Business Education

A review of the skills and knowledges necessary to use audio-visual aids, owed by intensive study and research in the literature available and by practice h the materials and techniques that apply to business education.

Summer (3)

### 1. Problems of Speech Correction and Articulation

Analysis and discussion of the major articulatory problems as encountered in lic school work, particularly in California. Required of all students for the speech rection credential. Not open to students with credit for Speech Arts 176.

(3)

### 1. The Teaching of Lip Reading

History, theory and methods of lip reading. Aids for the classroom teacher; prom and materials of instruction for the specialized teacher. Opportunities for practice ching are offered.

(2)

### 1. Problems of the Hard of Hearing

The adjustment of the hard of hearing group with emphasis on the public school d. State and county hearing programs; technique of audiometry; use of hearing s; educational, classroom, and social problems.

(2)

### 7A-179B. Nervous Speech Disorders

Classification of speech defects and disorders. Nervous speech disorders; stamring, stuttering, hesitation, cluttering. Teacher training in corrective technique for in public schools; clinic observation. Required of candidates for the Special Secary Credential in Correction of Speech Defects. Not open to students with credit in ech Arts 179A-179B.

Year course (3-3)

### 181. Exceptional Children

A course designed to meet the needs of teachers of the mentally handicapped, b also open to all teachers interested in studying the problems of exceptional children. study will be made of mental, physical, and emotional deviates.

Fall (3)

### 182. Curriculum and Methods for Teaching Mentally Retarded Children

The course deals with the selection, organization and presentation of curricul materials for teaching mentally retarded children.

Spring (3)

### 183. Practicum for Teaching Mentally Retarded Children

Interpretation and application of educational procedures utilized in teaching t retarded learner. A demonstration class will be available for observation. Educ tion 182 must be taken prior to, or concurrently with, Education 183.

Summer only (3)

### 189. Workshop in Secondary Education

This course is designed to meet the needs of individual or groups of teachers w wish to develop or continue the study of some problem with the consultation of t College Staff and the San Diego County Curriculum Staff.

Summer (3, 6)

### 191. Driver Education

A workshop type course designed to prepare teachers of the course in high scho Enrollment by permission of the instructor.

Summer (2)

### 199. Educational Problems

A course for senior and graduate students in residence and enrolled in teach education who have shown ability to work independently on educational problems. Tl problem will be chosen after consultation with a staff member. Admission by conse of the staff. Credit and hours to be arranged.

Fall or Spring (1-6)

## Graduate Courses

For general requirements for admission to graduate courses, see statement admission to graduate status in section on Admission and Registration. In addition these general requirements, 12 units of professional education are prerequisite f enrollment in all graduate courses.

### 230. Guidance Problems in Secondary Education

Individual and group study of the theory and practice of guidance with emphas upon practical problems of the members of the class.

Fall or Spring (3)

### 232. Problems in Vocational Guidance

A course to prepare teachers for vocational guidance in the secondary school Includes occupational information, vocational aptitude measurement, and education guidance.

(3)

### 233. Guidance Counseling Techniques

A course designed for school counselors. To stress the understandings an procedures necessary for effective interviewing.

(3)

### 237. Research in Guidance Problems

Individual study by graduate students who have demonstrated exceptional abilit and a need for such work. Admission by consent of the Director of Secondary Edu cation.

Fall or Spring (1 to 3)

**1. Problems in the Teaching of Arithmetic**

A study of research and practice in the methods of teaching and in the curriculum elementary and junior high school arithmetic. Prerequisite: Education 129 or quivalent.
(3)

**2. Problems in the Teaching of Reading**

Advanced study of developmental instruction in reading. Problems to be con- dered include reading readiness, the teaching of work recognition, developmental quences in reading skills and abilities, reading in the content fields, individual dif- rences, measurement, and interests. Students will select projects or problems of mediate interest to them. Prerequisites: Education 136 and 144 or equivalents.
Fall or Spring (3)

**5. Seminar in Elementary Education**

A study of the methodology of research with particular reference to the basic search in the phychology and teaching of the elementary school subjects. Pre- quisite: 12 units in elementary education and consent of the instructor.
Fall or Spring (3)

**0. Curricular Problems in Secondary Education**

A study of the present status and development of the secondary school curriculum. mphasis will be placed upon individual study and development of solutions of problems the students. Prerequisite: Graduate standing and consent of the instructor.
Fall or Spring (3)

**2. General Education in Secondary School**

A course designed for teachers in service. A study of the function and implementa- on of general education in the secondary school.

**6. Recent Trends in Secondary Curriculum**

A survey of current practices and trends in secondary schools with special phasis on general education. There will be opportunities for individual work on lated problems of interest to members of the class.
(3)

**7. Workshop in Intercultural Education**

A cooperative workshop sponsored by the College and the San Diego City hools in which opportunity will be provided to study trends in intercultural educa- on in American schools. Major attention will be devoted to development of units of rk and curricular materials, and opportunity will be provided for participants to come acquainted with audio-visual aids and other resources in the field of intercul- ral education. Enrollment only by previous application to the Dean of Education d limited to persons who have been admitted to graduate standing.
(4)

**8. Research in Curricular Problems**

Individual study by graduate students who have demonstrated exceptional ility and a need for such work. Admission by consent of the Director of Secondary lucation.
Fall or Spring (1 to 3)

**0. Federal, State, County and City School Organization and Administration**

A study of the organization, administration and supervision of federal, state, y and county school systems. Includes school finance, housing, and business ministration.
(3)

**2. The Organization and Administration of Elementary Schools**

A study will be made of the problems of personnel, local finance, curriculum, nt, community relations, and legal aspects of elementary schools. Required as rerequisite to Education 266. Prerequisite: Teaching experience.
(3)

**263. The Organization and Administration of the Secondary School**

A course designed for persons preparing for secondary school administration Topics will cover all aspects of the duties of an administrator, including personnel finance, curriculum, equipment and supplies, public relations, transportation, an law. Prerequisite: Possession of a valid General Secondary Credential.
(3)

**264. Elementary School Supervision**

Principles and practices of supervision and methods of evaluating instruction and the curriculum in elementary education. Prerequisite: General Elementary Credential, teaching experience, and Education 262, or equivalent.
(3)

**265. Secondary School Supervision**

A course designed for those who will be responsible for the supervision and evaluation of the curriculum and teaching methods in the secondary school. Prerequisite: Possession of a valid General Secondary Credential.
(3)

**266. Field Work in Elementary School Administration and Supervision**

A first-hand study of the administration and supervision of an elementary school as required for the Elementary School Administration and Supervision Credentials Field work will be carried on by all students under the direction of a college staf member. Prerequisite: Education 262 or 264.
Fall (2)

**267. Field Work in Secondary School Administration and Supervision**

A study of practices as they are found in secondary schools relative to administration and supervision; to insure direct contact with existing programs and procedures. Prerequisite: Education 263 or 265.
(2)

**316. Directed Teaching**

Systematic observation, participation, and teaching under supervision in an affiliated high school. Thirty clock hours of student teaching will usually earn one unit of credit, but the credit finally allowed will depend upon the nature and quality of the teaching done. Any work below a C grade is unacceptable for credit in this course.

No student can enroll in this course until he has completed at least 5 units of work in education.

During the semester in which the student takes his first assignment in student teaching, he must meet with the college supervisor one hour each week for conference and discussion of problems encountered in his teaching.

Students who have had student teaching in preparation for the junior high school or special secondary credentials should confer with their departmental and educational advisers concerning partial fulfillment of this requirement as the result of having completed the student teaching required for the credentials mentioned above.
Year course (3-3)

# ENGINEERING

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in engineering. Lower division require- ents. Physics 1A-1B-1C-1D, or 4A-4B-4C; Mathematics 3A-3B, 4A-4B; Chemistry -1B, Engineering 21, or their equivalent. Upper division requirements: A minimum 24 upper division units including the group required of all engineering students as itlined in the Engineering Curriculum in the section entitled: Preprofessional and ocational Curricula.

A *teaching major* is not offered in engineering.

### Minor

A *minor in arts and sciences* is offered in engineering. The minor must include at ast 15 units in engineering, 9 units of which must be from courses carrying upper vision credit. The courses selected must be a logical sequence approved by faculty lviser.

A *teaching minor* is not offered in engineering.

### Lower Division Courses

NOTE: Courses in engineering may not be used to meet any part of the lower vision natural science requirement, nor may they be used as part of a physical ience major or minor.

**-1B. Plane Surveying**

Use and adjustment of surveying instruments, computations and map-making, gether with a study of land, topographic, city and mine surveying. Two instruction riods and one three-hour period for field work and mapping each week. Prerequisites: rigonometry and Mechanical Drawing, or equivalent, and sophomore standing.

Year course (3-3)

**Mechanical Drawing**

Freehand lettering, use and care of drafting equipment, simple orthographic ojection, introduction to problems of dimensioning. Open to students lacking credit r a year course in senior high school mechanical drawing. Not open to students with edit for Industrial Arts 2.

Fall or Spring (2)

**. Descriptive Geometry**

Fundamental principles of descriptive geometry and their application to prob- ms of engineering. Lectures and drafting. Prerequisites: One year of mechanical awing, and sophomore standing.

Fall (3)

**. Machine Drawing**

Design and drawing of simple machine parts with emphasis upon the produc- on of standard drawings. Lectures and drafting. Prerequisite: Engineering 21, athematics 3A-3B.

Spring (3)

**. Materials of Construction**

Manufacturing processes, structural properties and adaptability of the principal aterials used in engineering. Lectures. Prerequisite: Sophomore standing.

Spring (2)

### Upper Division Courses

**0A-100B. Elements of Electrical Engineering**

Theory and characteristics of electrical equipment with emphasis on industrial plications.

**100A. Direct current circuits, generators and motors.** Introduction to alte nating current circuits.

**100B. Alternating current circuits, transformers, alternators, induction ar synchronous motors, conversion apparatus and transmission line**

Lectures and problems. Prerequisites: Mathematics 4A, Physics 1C or 4B or permissi of the instructor.
Year course (3-3)

**101A. Electrical Engineering Laboratory**

Laboratory determination of the characteristics of direct current machinery ar circuits, single phase alternating current circuits. One three-hour lab. and report p week. Prerequisite: Engr. 100A (may be taken concurrently).
Fall (2)

**101B. Electrical Engineering Laboratory**

Laboratory determination of the characteristics of single phase and polypha circuits, machines, and related equipment. One three-hour laboratory period and repo per week. Prerequisite: Engr. 100B (may be taken concurrently).
Spring (2)

**102A-102B. Analytical Mechanics**

Treatment of the fundamental principles of Newtonian mechanics. First seme ter: Study of the statics and kinematics of particles and rigid bodies. Second semeste Study of the dynamical principles underlying linear and rotary motion of rigid bodie with additional work in elastic and inelastic impact. Use of elementary vector analys in solving engineering applications in mechanics. Prerequisites: Physics 1A-1B 4A-4B or 2A-2B, and a working knowledge of the calculus. (Engineering 102A is prerequisite for 102B.) Students with credit in Physics 105A-105B may not recei credit in this course.
Year course (3-3)

**104. Communications**

Study of class C amplifiers, oscillators, modulators and detectors. Amplitu and frequency modulation, television systems, transmission lines, antennas and electr magnetic radiation. Students with credit for Physics 104 may not receive credit f this course. Prerequisite: Physics 102 or permission of the instructor.
Spring (3)

**105. Hydraulics**

A general course in hydraulics including the fundamental principles of hydr statics and hydrodynamics applied to the flow of water through orifices, over weir through pipes and canals. Lectures and problems. Prerequisites: Mathematics 4 Physics 1C or 4B. Recommended: Engr. 102A-102B.
Spring (3)

**106. Hydraulics Laboratory**

Laboratory determination of the characteristics of fluid flow and hydraulic equi ment. Includes flow through pipes, orifices, weirs; characteristics of various types pumps. One three-hour lab. period and report per week. Prerequisite: Engr. 105 (ma be taken concurrently).
Spring (2)

**122. Machine Design**

A study of motions, velocities, and accelerations in linkages, cams, gears, an related mechanisms. Designs of riveted and welded joints. Design of simple machin parts such as clutches, gears, and couplings. Two lectures, one three-hour draftin period per week. Prerequisite: Engineering 102A (may be taken concurrently), Eng neering 22.
Fall (3)

### 4. Radio Measurements

A laboratory course on measurements of the parameters of resonant circuits at dio frequencies. Study of the properties of oscillators, modulators, detectors and ave guides. Prerequisite: Previous or concurrent enrollment in Engineering 104. udents with credit in Physics 124 may not receive credit for this course.

Spring (2)

### 8. Applied Engineering Thermodynamics

Principles of thermodynamics. Application of principles in study of combustion ocess, boiler, steam engines, turbines, auxiliary apparatus. Prerequisites: Math A, Physics 1B or 4C.

Fall (3)

### 9. Heat Power Laboratory

Boiler testing and heat balance. Flue gas analysis, testing of steam power uipment. One three-hour lab. and report per week. Prerequisite: Engr. 128 (may taken concurrently).

Fall (2)

### 0. Route and Construction Surveying

Application of surveying to engineering problems. Reconnaissance, preliminary, cation, and maintenance surveys for highways, railroads, and airfields. Construction rveys for buildings and other structures. Earthwork computations. Two lectures d one three-hour field period per week. Prerequisites: Engr. 1B, Ast. 3.

Fall (3)

### 1. Advanced Surveying

Special problem in surveying. Methods of geodetic surveying; adjustment of servations, geodetic positions, map projections. Two lectures and one three-hour ld period per week. Prerequisites: Engr. 1B, Ast. 3, recommended Engr. 130.

Fall (3)

### 0. Strength of Materials

Elastic and ultimate strengths of materials. Analyses of types of failure. Stress alysis and deformation of simple structural and machine members. Photoelasticity. ectures and problems. Prerequisite: Engr. 102A.

Spring (3)

### 1. Materials of Engineering Laboratory

Theory and operation of testing machines and auxiliary apparatus. Standard sts to determine the significant characteristics of the commonly used engineering aterials. Heat treatment of metals. One laboratory period plus outside reading and port per week. Prerequisite: Engr. 140 (may be taken concurrently).

Spring (2)

### 2. Stress Analysis

Determination of stresses in simple framed structures such as roof trusses and ghway bridges. Aircraft structures. Effects of combined stresses. Statically indeterinate beams. Special problems. Analytical and graphical methods of solution. Lectures d problems. Prerequisites: Engr. 102A-102B, 140.

Fall (3)

### 5. Internal Combustion Engines

Application of theory of thermodynamics to internal combustion engines. Essenl features of design, operating characteristics, and application of gasoline, diesel, and s engines, and the gas turbine. Lectures and problems. Prerequisites: Physics 1B or C, Math. 4A. Recommended: Engr. 128.

Spring (3)

**150. Industrial Electronics**

The application of electron tubes in fields other than communications; consideration of high power rectification, induction and dielectric heating, measurement an control systems. Prerequisite: Physics 102.

Fall (2)

**156. Aerodynamics**

Properties of air, air flow, air foils, drag, engines and propellers, aircraft performance and stability, types of aircraft, aircraft instruments. Lectures and problems. Prerequisites: Engr. 102A-102B.

Spring (3)

**199. Senior Report**

Investigation of specific problems of advanced nature. Preparation of report. Prerequisite: Advanced senior standing.

Fall or Spring (2)

NOTE.—In laboratory courses special emphasis is placed upon the preparation o neat, concise, complete and intelligent reports.

# ENGLISH

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in English. Lower division requirements: least 15 units of work, including English 1, 6A-6B, and 56A-56B or 60A-60B. Upper vision requirements: a minimum of 24 upper division units in English and comrative literature, selected with the approval of the departmental representative; 2 ars of lower division work in a foreign language approved by the departmental presentative or the equivalent reading knowledge determined by examination. Further ork in the language, in upper division courses, is highly recommended.

A *teaching major* is offered in English for the general secondary credential or the neral junior high school credential. For specific information, refer to the outlines of quirements for these credentials. English majors who have been admitted to candicy for the general secondary credential may satisfy the foreign language requireent by one year of lower division foreign language, or equivalent, if 9 units of prossional education units have been completed.

### Minor

A *minor in arts and sciences* is offered in English. The minor must include at least units of work in English, 9 units of which must be from courses carrying upper vision credit.

A *teaching minor* is offered in English for the general secondary, the general nior high school, the special secondary, the general elementary, and the kindergartenimary credential. For specific information, refer to the outlines of requirements for ese credentials.

### Comparative Literature

For courses in world literature, giving credit toward the English major or minor toward the Comparative Literature minor, see Comparative Literature, page 95.

### Lower Division Courses

**English Fundamentals**

The elements of composition, including drill in grammar and usage; exercises in cabulary building and in fundamental reading skills; theme writing. Credit in this urse is equivalent to passing the English A examination and may be counted toward aduation as an elective but not to satisfy lower division English requirements in any rriculum.
Fall or Spring (2)

**Reading Laboratory**

A semi-tutorial service offered by the English Department to those wishing to prove reading ability. Open to all students at any level of college work. Consult partment chairman.
Fall or Spring (0)

**Writing Laboratory**

A semi-tutorial service offered by the English Department to those wishing sistance in writing projects, either remedial or advanced. Open to students at any vel of college work. Consult department chairman.
Fall or Spring (0)

**Freshman Composition**

Study and practice in the expression of ideas and factual materials; principles of ganization and of effective style, with emphasis on exposition. Prerequisite: Satisfacry English A examination or credit in English A.
Fall or Spring (3)

**Freshman Literature**

A course designed to develop college reading skills through practice in the analysis materials at varying levels of difficulty. Emphasis on the student's problems in reading rapidly and accurately mature books in literature, history, psychology, science, ilosophy, etc. Prerequisite: English 1 or 8.
Fall or Spring (3)

### 6A-6B. The Study of Literature

A basic course in the techniques of reading imaginative literature with sympath insight, and vividness. Methods of developing the informed and trained attention requ site to comprehension and appreciation of literary works, motion pictures, and radi presentations. Plays, stories, and poems contemporary or universal in appeal constitut the readings. Required of English majors; open to other students as an elective. Englis 6A is a prerequisite for 6B.
Fall and Spring (3-3)

### 8. English in Business

Theory and practice of business correspondence. Business letters as applied t salesmanship; problems in writing credit and collection letters, applications fo employment, adjustment letters, and sales letters. Prerequisite: English A or equiva lent, as indicated by Subject A Examination, or record from college and by test to b given by Commerce Department. This course is planned for students in the accountin and secretarial fields; units obtained in it cannot be used to meet English require ments in other fields.
Fall or Spring (3)

### 10. Recreational Reading

Development of personal tastes for leisure-time reading through lectures and writ ten reports. May be taken a second time with new materials.
Fall or Spring (1)

### 50A-50B. Survey of American Literature

Semester I: Major American writers from the beginning to 1860. Semester II American literature from 1860 to the present.
Year course (3-3)

### 56A-56B. Survey of English Literature

The study of some important works of English literature from the Anglo-Saxo period through the Victorian age, with emphasis upon the literary history of eac period.
Year course (3-3)

### 60A-60B. Literature and Personality

This course is devoted to the close study of a limited number of the great creator of English and American literature. Its object is to study, in several representativ great writers, the way in which a trained attention to masterpieces reveals to us th statement and resolution of the great issues of life, both in the individual self and i the cultural world. From such a study the goal of the course is to derive, fro markedly different specific works, orderly and generalized methods for the interpretation of great literature.
Year course (3-3)

### 61. Sophomore Composition

An elective course designed to give further training to the student who wishes practice in writing beyond the freshman level. Prerequisites: English 1 and English 2, or equivalent.
Fall (3)

### 62. The Short Story

A practical course in writing, including a study of short story techniques and purposes, and the writing of complete short stories. Prerequisites: English 1 and English 2, or equivalent.
Spring (3)

### 63. Foundations of the Language

A study of the important features of English grammatical structure, with emphasis on present-day usage. Designed to make more significant the native language through a study of the elements which compose it.
Spring (3)

## Upper Division Courses

### . Creative Writing

A writing workshop in which students are given opportunity to criticize each er's work. Emphasis on narrative and description, but freedom to pursue whatever iting forms may interest the student most. May be taken a second time with new terial.
Fall (3)

### . Recreational Reading

An advanced course in the group reading of modern drama, poetry and fiction.
Fall or Spring (1)

### . American English

The development of American English; regional and cultural differences in pronciation, grammar, and vocabulary.
Fall (3) (Offered in 1949-1950 and alternate years)

### A-116B. The Age of Elizabeth

Semester I: Poetry and prose, exclusive of drama. Semester II: The drama to 2, excluding Shakespeare.
Year course (3-3)

### A-117B. Shakespeare

A chronological survey. The first semester gives special emphasis to the histories chronicles; the second, to tragedy and the dramatic romances.
Year course (3-3)

### A-118B. Eighteenth Century English Literature

The first semester emphasizes the social satire of Swift, Pope, Addison, Steele, yden, Gay, Prior; and also the first stirrings of the romantic revolt in a number of portant poems and prose works. The second semester is devoted to Johnson and swell and their circle and to a significant romantic literature antedating the romantic burst.
Year course (3-3)

### A-119B. Nineteenth Century English Poetry

Semester I: The culmination of the romantic movement in the poetry of Wordsrth, Coleridge, Byron, Shelley, and Keats, in relation to the thought of the revoluary period. Semester II: Tennyson and Browning with their contemporaries successors, relating English poetry to nineteenth century life and thought.
Year course (3-3)

### . The Age of Milton

A study of the literature of the earlier seventeenth century, with emphasis on son, Donne, and Milton. Consideration is given to the political, religious, and ial backgrounds of the seventeenth century.
Spring (3)

### A-126B. Nineteenth Century English Prose

Semester I: Romantic and mid-Victorian prose writers, including Coleridge, zlitt, Lamb, DeQuincey, Carlyle, Landor, Macaulay, and Mill, related to the liter-, political, and social movements of the period. Semester II: Late nineteenth ceny essays of Arnold, Thomas Huxley, Newman, Pater, Ruskin, and Stevenson. Study scientific, aesthetic, and ethical backgrounds.
Fall (3)

### . Contemporary British Literature

Selected prose and poetry of England and Ireland from 1914 to the present, luding Shaw, Yeats, Synge, Joyce, Maugham, Huxley, D. H. Lawrence, Eliot, the ford poets, and the principal authors belonging to the two wars.
Spring (3)

### 131. American Literature: 1820-1860

The study of the important romantic writers, with emphasis on the New Engla group.

Fall (3)

### 132. The Frontier and American Literature

The influence of the frontier upon American literature studied through vario regions and movements. Examinations of source materials, biographies, and repr sentative writers.

Fall or Spring (3)

### 133. American Literature: 1860-1910

The rise of realism in American literature. Influences, foreign and native, whi promoted the movement. Definition of realism. The literary creed of the realists. T romantic attack and the realist defense.

Spring (3)

### 134. American Literature: 1910 to the Present

Ideas and forms in representative poetry and prose.

Fall or Spring (3)

### 135. American Colonial and Revolutionary Literature

The Puritan system of thought and way of life, and the literary and intellectu movements of the eighteenth century, studied in the works of such representati writers as Mather, Franklin, Paine, Freneau, and Brockden Brown.

Fall (3)

### 143A-143B. The English Novel

History of the English novel from the beginnings to the present. Extensi reading of novels with reports, lectures, and discussions. The first semester covers t nineteenth century; the second semester deals with the more modern works.

Year course (3-3)

### 149. The Study of Poetry

A course proceeding from simpler to more complex poetic productions, an designed to bridge the widening chasm between the poet and the ordinary ma Emphasis on current directions in poetry, and on poetry as an oral and auditory ar

Spring (3)

### 151. Chaucer

A study of Chaucer's works, with emphasis on "The Canterbury Tales" an "Troilus and Criseyde."

Fall (3)

### 162. Magazine Fiction

Coaching in constructing and writing short stories for commercial publications Admission by consent of the instructor.

Fall (3)

### 166. Honors Course

Type I: Special study. Open to members of the Honors Group in English (se The Honors Group under General Regulations). May be repeated with differen materials. Type II: Reading and discussion devoted to analyzing literature as a expression of a cultural field and to exploring the values of literature in the studies o the life of man. Registration limited to majors and graduate students in English, an to majors in art, anthropology, economics, history, philosophy, political science, psy chology, and sociology. Admission by consent of the instructor.

Type I: Fall or Spring (3)
Type II: Year course (3-3)

### 191. Advanced Composition

A course designed for prospective teachers of secondary school English. This i not a methods course, but a content course in grammar, composition, and journalism Required of all teaching majors in English; open to other students as an elective.

Fall (3)

### The English Language

The study of the history of the English language, of its words and structure, he changes in inflections, pronunciation, vocabulary, and meaning, and of its use an instrument of communication and human living. Open only to seniors and duate students.

Spring (3)

### Literary Criticism

A historical survey of the principles and practices of literary criticism from ek times to the nineteenth century. Readings in the works of Aristotle, Horace, ginus, Sidney, Boileau, Dryden, Lessing, Sainte-Beuve, Coleridge, and Arnold. en only to senior and graduate students.

Fall (3)

### Special Problems

Students who have demonstrated ability in literary studies may enroll for work er than that outlined in the regular courses. Admission only by consent of the ructor with whom the work is to be done.

Fall or Spring (1-3)

## Graduate Courses

### Shakespeare

Bibliography, critical study, special problems, criticism. Prerequisite: Graduate ding. Recommended: At least one undergraduate course in Shakespeare.

Spring (2)

### Mark Twain

Studies in the numerous aspects of Mark Twain's work and in his significance a product of the Frontier and as a representative American voice. Prerequisite: duate standing.

Fall (2)

### Regionalism in American Literature

Bibliography, special problems, with concentration on selected regions. Preuisite: Graduate standing. Recommended: At least one undergraduate course in erican literature.

Fall (2)

### Utopias

A study of Utopian thought from a literary rather than a sociological viewpoint. parative study of the forms of the projected ideal and of the satirical dream from to through Sir Thomas More, Shakespeare, Swift, Shelley, Morris, Wells, A. xley, and others. Prerequisite: Graduate standing.

Spring (2)

# FRENCH

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in French. Lower division requirement French A-B-C-D; German A-B or Spanish A-B or Latin A-B; History 4A-4B. Upp division requirements: A minimum of 24 upper division units, at least 21 units of whi must be in French, including French 199. The remaining 3 units may be selected fr Geography 118; History 143, 121; or Comparative Literature 118, 155, or 158, in co sultation with the Chairman of the Department. An average of C grade or better required in upper division major courses.

A *teaching major* is offered in French for the general junior high school crede tial. For specific information, refer to requirements for this credential.

### Minor

A *minor in arts and sciences* is offered in French. The minor must include at lea 15 units of work in French, 9 units of which must be from courses carrying upper di sion credit.

A *teaching minor* is offered in French for the general secondary, the gener junior high school, the special secondary, the general elementary, and the kindergarte primary credential. For specific information, refer to the outlines of requirements f these credentials.

### Lower Division Courses

**A-B. Elementary**

Intensive study of French grammar and syntax; daily written work discuss in class; class drill in conversational idiom and pronunciation; reading with or discussion and résumés; dictation; introduction to contemporary prose writer Credit not given for French A unless followed by French B. Students who have h one year of French in high school should register for French A for which only 2 uni will be allowed. Those who have had two years of French in high school shou register for French B for which only four units will be allowed. For specific inform tion, refer to page 17. French A, or its equivalent, is a prerequisite for French B.

Year course (5-5)

**C-D. Intermediate Reading**

Reading and composition; study of standard prose as a basis for class wor collateral reading with résumés and written reports; dictation. Prerequisite for C French B or three years of high school French. Prerequisite for D: French C or fou years of high school French.

Year course (3-3)

**SC. Scientific Reading**

Reading taken from the fields of chemistry, physics, medicine, zoology, biolog etc. Outside readings of books and periodicals, with written reports. Prerequisite French B or equivalent.

Fall (2)

### Upper Division Courses

**101A-101B. Conversation and Composition**

Translation into French from moderately difficult English prose. Outside readin of modern French prose, with written reports in French monthly. Readings and ora discussions in French of various facets of French life and culture.

Prerequisite: French D, or its equivalent, with grade of C.

Year course (3-3) (Offered in 1950-51)

**105A-105B. Modern French Drama**

Plays of Victor Hugo, de Vigny, de Musset, Scribe, Augier, Dumas fils, Pailleron Brieux, Hervieu, Maeterlinck, Rostand, and others read and discussed as to subjec matter and technique. Outside reading and reports. Prerequisite: French D, or it equivalent, with grade of C.

Year course (3-3)

### A-107B. Eighteenth Century Literature

The works of Montesquieu, Voltaire, Rousseau, the Encyclopédistes, and others. requisite: French D, or its equivalent, with a grade of C.

Year course (3-3) (Offered in 1952-53)

### A-110B. Modern French Novel

The French novel from Victor Hugo to the present day, including such authors Hugo, Dumas, Stendhal, Balzac, Flaubert, Loti, Anatole France, Bourget, Bor-ux, Bazin, Barrès, Romain Rolland, A. Gide, Marcel Proust, and others. Class ding, outside reading, and reports. Prerequisite: French D, or its equivalent, with de of C.

Year course (3-3) (Offered in 1951-52)

### A-111B. Seventeenth Century Dramatic Literature

Reading in class of plays of Molière, Corneille, and Racine. Outside readings lectures on the background of the seventeenth century in France. Prerequisite: nch D or its equivalent, with a grade of C.

Year course (3-3) (Offered in 1950-51)

### . Comprehensive Reading and Survey Course

Designed to fill up the gaps in the reading done in courses. Class meeting once eek for guidance, reports, and quizzes. Required of all seniors majoring in French.

Spring (3)

## GENERAL LANGUAGE

### IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in general language.

### Lower Division Course

### Latin and Greek Word Derivation

A general and elementary course in philology. A study of Latin and Greek roots ost frequent occurrence in English, and of the English words derived from them.

Fall (3)

### Pronunciation of French, Italian and German

A course designed especially for the use of singers, radio announcers, etc. No equisite. This course may be taken for one, two or three units of credit depending the individual student's need. Credit in this course does not count toward the 10 foreign language requirement.

Spring (1-3)

# GEOGRAPHY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in geography. Lower division requiremen Geography 1, 2; Geology 1A-1B. Recommended: A reading knowledge of Fre or German. Upper division requirements: a minimum of 24 upper division units geography, or 18 units in geography and 6 units selected from related fields w approval of the departmental representative.

A *teaching major* is not offered in geography; however, courses in geogra may be used as part of the *social science major* for the general junior high sch credential or the general secondary credential. For specific information, refer to outlines for requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in geography. The minor must include least 15 units of work in geography, 9 units of which must be from courses carry upper division credit.

A *teaching minor* is not offered in geography for the general secondary credenti however, it may be used as a part of the *social science minor* for the general jun high school, the special secondary, the general elementary, and the kindergarten- mary credentials. For specific information, refer to requirements for these credentia

### Lower Division Courses

NOTE: Geography 1, 3, or 4 may not be used to meet any part of the 12-u social science requirement. Geography 1 or 3 (but not both) may be used to meet p of the 12-unit natural science requirement.

**1. Introduction to Geography: Physical Elements**

The nature of maps, weather and climates of the world; natural vegetatic land forms and their associated soils, with reference to their climatic relationshi the seas and their coasts. One field trip. This course is classified as a natural scien (See lower division requirements.)

Fall or Spring (3)

**2. Introduction to Geography: Natural and Cultural Regions**

The regional differentiation of the world by human activity; areal bases economy and nationality. Prerequisite: Geography 1.

Fall or Spring (3)

**3. Elementary Meteorology**

An elementary study of the earth's atmosphere and changes in it which produ our weather and influence human affairs. Special attention given to local conditio instruments, and records. Aeronautical meteorology stressed in the fall semest This course is classified as a natural science. (See lower division requirements.)

Fall or Spring (3)

**4. Map Reading and Map Interpretation**

Representation of geographic data by means of maps. Interpretation of proj tions, scales, symbols, land forms, and culture from topographic maps; measureme of cultural data on maps. This course may not be counted toward lower division soc science requirement.

Fall (2)

**10. Economic Geography**

Beginning course in economic geography designed for commerce and econon majors. Prerequisite: Geography 1.

Fall or Spring (3)

### Upper Division Courses

**112. Geography of California**

The physiographic regions of California and the cultural landscapes develop by the successive cultural groups. Prerequisite: Geography 1 or consent of instruct

Spring (3)

### 1. Climatology

A survey of the principal classifications of climates of the world; regional racteristics of climate; relations to soils, vegetation, and human activities. Prequisite: Geography 1 or consent of instructor.

Fall (3)

### 1. Geography of Latin America

The natural regions of Latin America; their occupational condition and historical lution. Prerequisite: Geography 1 or consent of instructor.

Fall (3)

### 1. Geography of Northern and Eastern Europe

A study of the cultural development of the countries of northern and eastern ope in relation to physical background and historical evolution. Prerequisite: graphy 1 or consent of instructor.

Fall (3)

### 1 Geography of the Mediterranean Area

A study of the cultural development of the countries of Southern Europe, Western a, and North Africa in relation to physical background and resources. Prerequisite: graphy 1 or consent of instructor.

Spring (3)

### Geography of South America

A study of the physical regions and human geography of South America, including a review of the history of colonization and the exploitation of resources. Prereqte: Geography 1 or consent of instructor.

Fall (3)

### Geography of Middle America

A study of the physical and human geography of Mexico, Central America, the islands of the Caribbean, including a review of the history of colonization the exploitation of resources. Prerequisite: Geography 1 or consent of instructor.

Spring (3)

### Geography of North America

The natural regions of North America, their formation and economic and orical development. Prerequisite: Geography 1 or consent of instructor.

Spring (3)

### Geography of Asia

The cultural regions of Asia, their physical environment, and historical developt. Prerequisite: Geography 1 or consent of instructor.

Fall (3)

### Geography of the San Diego Area

Directed individual urban and rural field work in the San Diego area; the ping of a small area and making its geographic interpretations. Prerequisites: graphy 1 and 2 or consent of instructor.

Spring (3)

### Advanced Economic Geography

A survey of the raw materials of world trade; their production and distribution elated to major geographic regions of the world. Prerequisite: Geography 1 or ent of instructor.

Fall (3)

### Conservation of Natural Resources

Nature and extent of mineral, soil, water, forest, and wild life resources and conservation; with particular emphasis on the United States, against a general ground of world resources. Conservation philosophies and practices, and their raphic bases. Prerequisite: Geography 1 or consent of instructor.

Spring (3)

### Honors Course

To be arranged after consultation with the chairman of the department. (See 15)

Fall or Spring (Credit to be arranged)

# GEOLOGY

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is not offered in geology. Students preparing for la professional training in geology should plan on completing Chemistry 1A-1B; Phys 1A-1B-1C-1D or 4A-4B-4C; Mathematics 3A-3B; Engineering 1A-1B, 21A; a Geology 1A-1B, 21A-21B.

A *teaching major* is not offered in geology; however, courses in this field may used as part of the *general science major* for the general junior high school credenti For specific information, refer to the outline of requirements for this credential.

### Minor

A *minor in arts and sciences* is offered in geology. The minor must include at le 15 units of work in geology, 9 units of which must be from courses carrying upper di sion credit.

A *teaching minor* is not offered in geology; however, courses in this field may used as part of the *general science minor* for the general junior high school, the spec secondary, the general elementary, and the kindergarten-primary credentials. F specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A. Physical**

The composition, origin, and distribution of earth materials, and their mod cation through mechanical and chemical process of change. Three lectures and o three-hour laboratory period weekly with related field study during the semester. (N open to students who have had Geology 2A except for one unit upon the completion the laboratory section.)

Fall (4)

**1B. Historical**

Theories of earth origin, and the evolutionary history of the earth as trac through rock and fossil records. Consideration of the Paleontologic Sequence. Thr lectures and one three-hour laboratory period weekly, with arrangement for field stu and conference during the semester. Prerequisite: Geology 1A or equivalent.

Spring (4)

**2A. General**

Similar to Geology 1A but without laboratory. Emphasis upon origin a development of earth's surface features. Open to all students except those alrea presenting credit in Geology 1A. Two lectures and one demonstration and discussi hour weekly.

Fall (3)

**2B. Physiography of United States**

A study of the land forms of the United States and their physiographic history illustrative of universal geologic conditions. Two lectures and one discussion ho weekly. Prerequisite: Geology 1A or 2A.

Spring (3)

**21A-21B. Mineralogy**

Study of the common minerals and rocks. Use of the blowpipe, simple chemic reagents, and the petrographic microscope, but with emphasis upon sight determinatio Prerequisite: Geology 1A and high school chemistry, or equivalents.

Year course (3-3)

### Upper Division Courses

**100. Structural Geology**

The evolution and description of the structural and topographical features of t earth. Faulting, folding, and orogenic forces with practical illustrations from t North American Continent and California geologic conditions. Lectures, discussion and occasional field trips. Prerequisite: Geology 1A-1B or 2A-2B.

Fall (3)

### Museum Work

Selection and preparation of materials for the college museum collections. phasis upon creation of self instructive displays for use on the elementary and ondary as well as the collegiate level. Prerequisite: Geology 1A-1B, and consent of instructor.

Fall or Spring (1 to 2)

### Geology of California

Directed reading and group discussion of California geologic literature. Designed acquaint the student not only with the important structural and geomorphic units the State but with the variety of important source materials of geologic literature well. Use of bibliographies, state and federal surveys, research publications, etc. requisite: Geology 1A-1B, and consent of the instructor.

Spring (2)

### Field Geology

Field instruction in geologic methods. Reconnaissance of adjacent unmapped as with preparation of a geologic map and accompanying report. Work accomhed primarily on week-ends with minimum classroom activity during the week organizational details. Prerequisite: Geology 1A-1B, and consent of the instructor.

Fall or Spring (1 to 4)

### Special Study

Individual work in field, library, laboratory, or museum under staff supervision. n only to qualified students upon consultation.

Fall or Spring (1 or 2)

# GERMAN

## IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in German; however, students desiring to carry advanced work in German should consult with the Chairman of the Department of Foreign Languages.

### Lower Division Courses

**A-B. Elementary**

Pronunciation, reading and grammar, with practice in simple conversation, narration and description, both oral and written. Credit not given for German A unless followed by German B. Students who have had one year of German in high school should register for German A for which only two units will be allowed. Those who have had two years of German in high school should register for German B for which only four units will be allowed. For specific information, refer to the section entitled: Lower Division Requirements for All Curricula. German A, or its equivalent, is a prerequisite for German B.

Year course (5-5)

**C-D. Intermediate Review and Reading**

Reading and composition; study of standard prose as basis for class work; collateral reading with written reports; German conversation, with the texts read as a basis; dictation. Prerequisite: German B or three years of high school German, or its equivalent. Students with credit for four years high school German, or its equivalent, should enter German D.

Year course (3-3)

**SC-SD. Scientific Reading**

First semester, readings in scientific reader on chemistry, physics, etc.; occasional written reports on scientific subjects read outside of class; sight reading. Second semester, readings in special scientific or technical works; weekly written reports required; sight reading. Prerequisite for SC: German B with a grade of C or three years of high school German; for SD: German SC, German C, with a grade of C, or four years of high school German.

Year course (3-3) (Not offered in 1949-50)

### Upper Division

**101A-101B. Advanced Conversation and Composition**

Translation into German of moderately difficult English prose. Free composition in German, written and oral. Outside reading of modern German plays and prose, dealing with various aspects of German life and culture, with written reports and oral discussions in German. Oral and written practice in conversational German. Prerequisite: German D, or equivalent, with grade of C.

Year course (3-3) (Not offered in 1949-50)

# HEALTH EDUCATION
## IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

*Major* work is not offered in health education.

### Minor

A *minor in arts and sciences* is offered in health education. The minor must include least 15 units of work, 9 units of which must be from courses carrying upper division dit. The minor must include the following courses: Physical Education 51, Home nomics 61A, Health Education 65, 152, 153, and 199.

A *teaching minor* is offered in health education for the general secondary, the eral junior high school, and the special secondary credentials. Physical education jors may use health education as a second teaching minor only. For specific infortion, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**Principles of Healthful Living**

A course concerned with the personal health problems of college students; igned to provide scientific health information; promote wholesome attitudes and ctices relating to healthful living. Required of all freshmen.

Fall or Spring (2)

**Community Health**

A study of community health problems; the role of the citizen, the public and vate (or voluntary) agencies in promoting and protecting the health of the comnity. Prerequisite: Health Education 21. Required of physical education major dents.

Fall (3)

**Physiology of Reproduction**

A course consisting of a series of lectures and discussions dealing with normal abnormal physiology and anatomy of reproduction; facts and frauds in sex iene, and related topics. Prerequisite: Health Education 21.

Fall or Spring (1)

### Upper Division Courses

**Health Education for Teachers**

A course for teacher education students designed to develop a teacher awareness pupil health needs. The elements of the health education program are considered, hasizing the responsibility of the teacher in health guidance; observation of school dren; techniques and procedures for screening defects; promoting health instruc; and providing a safe, sanitary, healthful school environment. A study of the munity agencies promoting the health and welfare of the school child.

Fall or Spring (2)

**Health Education Programs**

The construction of the health education program including objectives, scope and ence of instruction, teaching methods, source materials and evaluation procedures; practice in building functional instructional units. Prerequisite: Health Educa 151.

Fall (3)

**Administration of School Health Program**

The principles, policies and practices in organizing and conducting the school th program as an integral part of the total school and community program. A study he administrative aspects of the divisions of the school health program; health ruction, health service (including health guidance), healthful school living, and tionship to physical education and recreation. Partially fulfills Health and Develop t Credential requirement for nurses.

Spring (3)

**199. Special Study in Health**

An opportunity is presented for extensive review of pertinent literature, i vidual research, and advanced study of problems in the profession. Credit will ra from 1 to 3 units according to the type and amount of work. Prerequisite: Appro of the Chairman of the Division.

Fall or Spring (1 to 3)

### Graduate Courses

**202. Problems in Health Education**

A survey of current problems facing the Health Education profession is stu through a review of the literature, discussion of trends, observation of school situati together with the analysis and evaluation of actual problems. Written reports required. Prerequisite: Graduate standing.

Fall or Spring (2)

# HISTORY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in history. Lower division preparation for major : History 4A-4B, or 8A-8B, or 9A-9B, and either Political Science 1A-1B, or A-71B, or Economics 1A-1B. Two of the above history courses are recommended for dents planning to major in history, and it is suggested that History 4A-4B be luded as one of them. No freshman shall enroll in more than one lower division urse in history during any one semester without the permission of the department. per division requirements : a minimum of 24 upper division units in history, includ- History 199, and a minimum of a year of concentration in each of three of the lowing fields : (a) Ancient and Medieval ; (b) Modern Europe ; (c) United States ; ) Latin America ; (e) Pacific Area and the Far East. These courses must be selected der the guidance of the chairman of the department. A reading knowledge of one eign language is strongly recommended.

A *teaching major* is offered in history for the general secondary credential. History y also be used as part of the *social science major* for the general junior high school dential or the general secondary credential. For specific information, refer to the tlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in history. The minor includes from 15 to 18 its of work in history, 9 units of which must be from courses carrying upper division dit including a year course.

A *teaching minor* is offered in history for the general secondary credential or as rt of the *social science minor* for the general junior high school, the special secondary, general elementary, and the kindergarten-primary credentials. For specific infor- tion, refer to the outlines of requirements for these credentials.

### Explanation of Courses

NOTE : History 17A-17B does not count toward credit for a major or minor history.

Any history course, with the exception of History 270A-270B, may be taken her semester, the A part not being a prerequisite to the B part.

### Lower Division Courses

**-4B. History of Modern Europe**

A survey of European society, institutions and politics from about 1500 to the sent. Fall semester : 1500-1799. Spring semester : 1799 to the present.

Year course (3-3)

**-8B. History of the Americas**

Survey of the history of the western hemisphere from its discovery to the present e.

Year course (3-3)

**-9B. History of the Pacific Ocean Area**

A general survey of the history and civilization of the peoples of the Pacific, with cial emphasis upon exploration, trade, international rivalries, and social evolution the island areas.

Year course (3-3)

**A-17B. History of American Civilization**

Survey of the political and social development of the United States, with emphasis on the rise of American civilization and ideals.

NOTE : This course is not open to freshmen.

Year course (3-3)

### Upper Division Courses

**A-111B. Ancient History**

Fall semester : Greek history to the Roman conquest. Spring semester : Roman tory to the fourth century A.D.

Year course (3-3)

**121A-121B. Medieval History**

Survey of the main events of European social, cultural, religious, political a economic history, between 500 and 1300 A.D.

Year course (3-3)

**131A-131B. Renaissance, Reformation and Counter-reformation**

A history of personalities and events connected with the social, political, cultur economic and religious change between 1300 and 1600.

Year course (3-3)

**141. Europe in the Seventeenth and Eighteenth Centuries**

European thought, politics and international relations from the Thirty Yea War and Louis XIV to the Seven Years' War.

Fall (3)

**142. The French Revolution and Napoleonic Era**

Study of conditions in France prior to 1789, the Revolution, 1789-1799, the orga ization of France and Europe under Napoleon, character of his empire, and the rec ganization of Europe at the Congress of Vienna.

Spring (3)

**143A-143B. Europe in the Nineteenth Century**

Reaction in Europe, the development of nationalism, the impact of industrialis and the background of World War I. Covers period 1815-1914.

Year course (3-3)

**144A-144B. Europe and the World Wars**

Developments in Europe from 1914 to the present. Fall semester: 1914-193 Spring semester: 1939 to present.

Year course (3-3)

**151A-151B. History of England**

A survey of political and constitutional development in England since 1066; t transition from medieval England to modern; Tudor despotism; struggle for sel government under the Stuarts; rise and development of present-day political and soci institutions. This course is designed for pre-legal students, majors in English, and as background for American history.

Year course (3-3)

**156A-156B. History of British Expansion**

A study of the growth, development, and break-up of the older overseas empire the beginnings of the newer empire after 1783; the rise, federation, and imperial rel tions of the British Commonwealth of Nations; the crown colony system; India unde British rule; British expansion in Africa and the Pacific; development of the Britis mandates. History 156B is not open to students with credit for Political Science 160.

Year course (3-3)

**161. Mexico and Caribbean Countries**

Special attention to relations between the United States and these countries, an to recent developments in Mexico.

Fall (3)

**162. South America Since Independence**

Republics of South America. Development of nationality, struggles for politica stability, exploitation, diplomatic and commercial relations with the United States, an other international problems of South America. Survey of present-day conditions.

Spring (3)

**171A-171B. The Rise of the American Nation**

Semester I: Lectures and readings on English colonization in North America, th development of colonial institutions and political customs, and areas of internationa conflict during the eighteenth century. Semester II: The revolutionary movement an the establishment of the government under the Constitution of 1787 to the close of th War of 1812.

Year course (3-3)

### 2A-172B. Constitutional History of the United States

Colonial governments, formation of the national Constitution, historical development of constitutional government, and significant phases of American constitutional w. Not open to students with credit for Political Science 139A and 139B.
Year course (3-3)

### 3A-173B. The Expansion of the United States

Lectures and readings on Jacksonian democracy, territorial expansion and the exican War, the slavery controversy, Civil War and Reconstruction, and attention to e growth and progress of the United States to the close of the nineteenth century.
Year course (3-3)

### 5. The United States in the Twentieth Century

The rise of the United States to the position of a world power; social and economic problems posed by the machine age; political action and adjustment, actual and oposed, intended as solutions for these problems.
Spring (3)

### 6A-176B. History of American Foreign Policy

Lectures and readings in the field of American foreign relations since 1776, with ecial emphasis, in the second semester, upon affairs since 1900. A general survey urse. Not open to students with credit for Political Science 158A-158B.
Year course (3-3)

### 9A-179B. Intellectual History of the American People

A study of the ebb and flow of ideas in the United States since the founding of e English colonies, with special attention devoted to social and political thought.
Year course (3-3)

### 1A-181B. History of the West

The American frontier: Expansion, exploration, settlement and building of the w states, with emphasis upon frontier problems of defense, communications, finance, c.; the development of cultural institutions. A critical examination of the causes, fects and results of the frontier experiences of the American people. Second semester als chiefly with the Far West and its political influence upon the American people. rontier influences on American ideals and politics.
Year course (3-3)

### 9. History of California

The economic, social, intellectual, and political development of California from e earliest times. Emphasis will be on the founding of California, international ruggles for California; American conquest and Gold Rush Era; development of lifornia as a state.
Fall or Spring (3)

### 1A-191B. History of the Far East

Particular emphasis during the first semester upon the history, both internal d international, of the Far East through the nineteenth century. The second semester ill be devoted to a consideration of developments in the twentieth century.
Year course (3-3)

### 2. Modern Russia

A general survey of Russian history, with emphasis upon the period since Peter e Great; the relations between the Russian Empire and its national minorities; arist experiments in political and social reform; the rise and spread of revolutionary cialism; the collapse of the Russian Empire; the development of the U. S. S. R.
Spring (3)

### 3. History of China

A survey of Chinese history and institutions from antiquity to the present.
Fall (3)

### 194. History of Japan

A general survey of the political, economic and social development from t foundation of the empire to contemporary times. Special attention will be given religions, phliosophy, literature and the arts.

Fall (3)

### 199. Special Course for Advanced Students

Required of all students with a history major in liberal arts and those worki toward a General Secondary credential with a history major. To be attended duri the senior year.

Spring (2)

## Graduate Course

### 270A-270B. Seminar

Required of all candidates for a General Secondary credential with history the major. Special emphasis upon the application of research in American history teaching in junior high school, high school, and junior college. History 270A is a pr requisite to 270B. Prerequisite: Restricted to students having completed sixteen eighteen units in upper division history including History 199, or with the conse of the instructor.

Year course (2-2)

# HOME ECONOMICS

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is not offered in home economics; however, students ny elect a *general major* with the field of concentration in home economics. For specific formation on the home arts curriculum, refer to the Home Arts Curriculum in the tion entitled: Preprofessional and Vocational Curricula, and for further information the general major, refer to the section entitled: Upper Division Requirements for the chelor of Arts Degree in Arts and Sciences.

A *teaching major* is not offered in home economics.

### Minor

A *minor in arts and sciences* is offered in home economics. The minor must include least 15 units of work in home economics, 9 units of which must be from courses rrying upper division credit.

A *teaching minor* is offered in home economics for the general secondary, general nior high, and special secondary credentials. Home economics may also be used as second minor for the general elementary credential. For specific information, refer the outline of requirements for these credentials.

### Lower Division Courses

NOTE: Courses in home economics may not be used to meet any part of the unit social science requirement, nor may they be used as part of a social science jor or minor.

**Home and Family Life**

Consideration of necessary preparation for marriage, family budgets and money nagement; recreation, entertaining and social usage; finding a home, its furnishings d equipment with consideration of arrangement and care; child care, proper training d guidance. Open to men and women.
Fall or Spring (3)

**Food Preparation**

Principles of food selection, preparation and service with consideration of thetic and nutritional values. Experience in food preparation and meal service. e lecture and two three-hour laboratories per week.
Fall (3)

**Fundamentals of Clothing**

Selection of clothing with self-analysis as a basis; wardrobe planning and buying cedures. A study of commercial patterns and principles of garment construction. o three-hour laboratories and lecture per week.
Fall (3)

**Clothing Design**

Selection and construction of children's and adults' garments; care, repair and ke-over problems of clothing. One lecture and two three-hour laboratories per week. requisite: Home Economics 10 or equivalent.
Spring (3)

**Household Equipment**

The selection and utilization of household equipment and storage space.
Fall (2)

**Nutrition**

Practical problems of nutrition including food requirements, food selection, and l habits. For men and women. One two-hour lecture per week.
Spring (2)

### 61B. Nutrition Laboratory

Nutrition principles applied to food preparation, meal preparation, and spe diets. One three-hour laboratory per week.
Spring (1)

### 62. Food and Nutrition

Selection, purchase, and service of meals with a consideration of nutritio needs of family groups, food habits and social customs. One two-hour lecture one three-hour laboratory per week. Open to all students except prenursing stude
Spring (3)

## Upper Division Courses

### 100. Advanced Clothing Design

Design and construction of tailored silk and wool garments, informal and for type dresses. Costume assembling. One lecture and two three-hour laboratories week. Prerequisite: Home Economics 11 or equivalent.
Spring (3)

### 101. Clothing Selection

Aims to develop taste in dress through a better understanding of the relation art principles, psychology, fashion trends, personality and physical characteristics individuals. History of costume is studied briefly as an aid in understanding recurr cycles in fashion. A consideration of buymanship information necessary in wardr selection to insure satisfaction and economy.
Spring (3)

### 102. Child Growth and Development

This course deals with a study of the mental, emotional, social, and physi development during childhood and early adolescence. Directed observation requir Not open to students who have credit for Psychology 102, 106, or Education 102B
Fall or Spring (3)

### 105. Family Meals

This course deals with the planning, preparing, and serving of attractive, w balanced meals for different income levels, and for various occasions. The student have responsibility for menu making, food purchasing, and meal management. T three-hour laboratories, one hour lecture per week.
Fall (3)

### 108. Marriage and the Family

Preparation for marriage. Prediction scales for evaluating success or fail in marriage. Parent-child relationships; factors in successful and unsuccessful m riages; higher education and the birth rate; married women in industry and prof sions; desertion and divorce. Not open to students who have credit for Sociolo 45, 55, or 108.
Fall or Spring (3)

### 150. Home Management

Integration of the learning activity around a living situation. Management money, time and energy in the home. Principles underlying the most efficient ma agement of an average home will be put into practice. Three lectures per week.
Fall or Spring (3)

### 160A. Merchandise Analysis—Textiles

Properties, uses, selection and care of textile fibers and fabrics. The aim is develop judgment in the evaluation involved in the selection of textiles.
Fall (2)

### 160B. Merchandise Analysis—Nontextiles

Properties, uses, selection and care of metals, glass, rubber, fur, enamels a plastics.
Spring (2)

**1. General Textiles**

Factors involved in fundamental weaves, fabrics, color, and finishes with reference to selection of fabrics for home decoration and clothing. Relationships to durality and cost are emphasized. Open to all students except merchandising majors.
Spring (2)

**0. Child Care and Development**

A study of the prenatal and pre-school periods of child development. Directed servation and participation in the nursery school.
Spring (3)

# INDUSTRIAL ARTS

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

*Major* and *minor* work in industrial arts are not offered in the arts and sciences ricula. Courses are divided into two groups: (1) those leading to Professional Eduion for teachers; and (2) those designed for General Education. Students desiring ctical training in shopwork on an elective basis should make their course selections m general education shop courses. Special emphasis is given to individual interests l objectives on a general shop basis.

### Minor

A *teaching minor* in industrial arts is offered for the general junior high, special ondary, and general secondary credentials. Industrial arts may also be used as a ond minor for the general elementary credential. For specific information, refer to l outline of requirements for these credentials.

### Lower Division Courses

NOTE: Courses in industrial arts may not be used to meet any part of the 12-unit sical science requirement, nor may they be used as part of a major in the physical nces.

**eneral Shop Theory and Practice**

A study of shop practices in the processing and fabrication of various engineering erials. Students investigate standard tools and equipment used in modern techogy and learn how to obtain data from tables and formulas necessary to successful p work.
Fall (3)

**Mechanical Drawing**

Freehand lettering, use and care of drafting equipment, simple orthographic jection, introduction to problems of dimensioning. Not open to students who have lit for a year course in senior high school mechanical drawing or to students who e credit for Engineering 2.
Fall or Spring (2)

**1 Introductory General Shop**

A general introductory shop course covering the areas of wood, machine and h metal, sheet metal, foundry, forge, welding, and electricity. Basic elements of above areas will be mastered during the first half of the semester with special ideration given to individual interests and needs during the second half.
Fall (3)

**2 Intermediate General Shop**

Shop training in any two of the following fields: woodworking, metalworking, ding, forging and machining. Work will be largely on an individual project basis emphasis on acquiring skills which have value in a liberal education.
Spring (2)

**41. Elements of Metalworking**

Training in the use of hand tools commonly used in metalworking. Discussio and demonstration of the principles and techniques of metalworking. Required of candidates for teaching credentials in industrial arts.

Spring (3)

**51. Elements of Woodworking**

Training in the use of hand tools commonly used in woodworking. Discussio and demonstration of the principles and techniques of woodworking. Required o candidates for teaching credentials in industrial arts.

Spring (3)

**61. Elements of Electricity**

Elementary electricity as related to the home and industry; includes the stud of basic principles of electricity and application to household appliances and relate projects.

Fall (3)

## Upper Division Courses

**121. Advanced Mechanical Drawing**

Lettering, orthographic and isometric projection of machines and machine parts dimensioning, working drawings, and reproduction. Prerequisite: Industrial Arts or equivalent. Not open to students with credit for Engineering 22.

Spring (3)

**141. Advanced Metalworking**

Plumbing and pipefitting including threading, cutting, and installation of pipe and fittings. Household maintenance. Sheet metal development and fabrication. Prerequisite: Industrial Arts 41.

Fall (2)

**143A. Machine Shop Practice**

The use and care of common machine tools. Lathe work stressed. Prerequisite Industrial Arts 41.

Fall (3)

**143B. Machine Shop Practice**

Shaper and milling machine work with advanced lathe work. Prerequisite Industrial Arts 143A.

Spring (3)

**146. Forging and Welding**

Elementary and fundamental principles of forging and welding; including oxyacetylene and electric welding. Prerequisite: Industrial Arts 41.

Spring (2)

**151A. Furniture Making**

Designing and constructing furniture. Prequisite: Industrial Arts 51.

Fall (2)

**151B. Furniture and Cabinet Making**

Advanced problems in woodwork. Mill cabinet work and original furniture desig and construction. Prerequisite: Industrial Arts 151A

Spring (2)

**161. Advanced Applied Electricity**

Study and analysis of commonly used electrical equipment. Prerequisite: Industrial Arts 61

Spring (2)

**190. Experimental Shop**

Individual shop work on complex projects on an experimental basis.

Spring (2)

# JOURNALISM

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is not offered in journalism. Students desiring major rk in journalism at this college should plan for a *general major* with the field of con- ctration in journalism. For specific information regarding this plan, refer to the cur- rulum in pre-journalism in the section entitled: Pre-professional and Vocational rricula, and to the description for the general major in the section entitled: Upper vision Requirements for the Bachelor of Arts Degree in Arts and Sciences.

### Minor

A *minor in arts and sciences* is offered in journalism. The minor must include at st 15 units of work in journalism, 9 units of which must be from courses carrying per division credit.

**A *teaching minor* is not offered in journalism.**

### Lower Division Courses

**A. Elements of Journalism**

Theory of news writing; introduction to the newspaper as an institution in dern society. Prerequisite: Sophomore standing and grade of B in Freshman com- ition, or consent of instructor.

Fall (3)

**3. News Gathering and Reporting**

Practice in writing news copy, both for class criticism and for publication in *e Aztec*. Prerequisite: Grade of C or better in Journalism 51A.

Spring (3)

**Special Projects**

Special work in journalism by arrangement with instructor. Work on *The Aztec*, rbook and other publications, with consent of instructor. (NOTE: A maximum of nits of Special Projects courses may be credited toward satisfaction of General jor or Journalism Minor requirements. The number of such units taken as elective dit is not limited except at the instructor's discretion.)

Fall and Spring (1-3)

### Upper Division Courses

**A. Magazine Article Writing**

The technique of the magazine article; article types; research techniques. Pre- uisites: Junior standing, with average grade of B in all previous composition and rnalism courses, *plus* permission of instructor.

Fall (3)

**B. Magazine Article Marketing**

Market analysis; slanting; the business of writing. Production of at least two -length magazine articles, and marketing of same, required during the course. Pre- uisite: Journalism 101A with grade of C or better.

Spring (3)

**Advanced Editing and Reporting Techniques**

Editing copy, writing headlines, making up pages, handling telegraph copy. ctice in specialized forms of journalistic writing. Prerequisite: Journalism -51B.

Fall (3)

**City and County Newspaper Practice**

A special course in applied journalism during which students work on nearby y and weekly newspapers by special arrangement with editors. Prerequisite: Jour- sm 51A and 51B with grade of B, *plus* permission of instructor.

Fall or Spring (1-3)

**Special Projects**

Special work in journalism by arrangement with instructor. Work on *The Aztec*, book and other publications, with consent of instructor. (See "Note" under Jour. above.)

Fall or Spring (1-3)

# LATIN

## IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in Latin.

### Lower Division Courses

**A-B. Elementary**

Thorough study of Latin grammar with daily written exercises and the translation of selected passages from Caesar, Cicero, and Pliny. The importance of thes authors and their culture to western civilization will be considered. Students who hav had one year of Latin in high school should register for Latin A for which only 2 unit will be allowed. Those who have had two years of Latin in high school should registe for Latin B for which only 4 units will be allowed. For specific information, refer t page 17. Latin A, or its equivalent, is a prerequisite for Latin B.

Year course (5-5)

**C-D. Intermediate**

Survey of Latin poetry with chief emphasis upon Vergil's *Aeneid.* Selection will be read from Catullus, Horace, Ovid, and others. Parallel European poetry will b considered. Latin B or equivalent is a prerequisite for Latin C. Latin C or equivalent i a prerequisite for Latin D.

Year course (3-3) (Not offered in 1949-50)

# LIBRARY SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

*Major* and *minor* work are not offered in library science.

### Lower Division Courses

NOTE: Library science may not be used to satisfy any part of the 12-uni social science requirement, nor may it be used as part of a social science major o minor.

**10. Use of the Library**

The chief object is to give a working knowledge of some of the resources of th library which every teacher and student should understand—the decimal classification, the card catalog, periodical indexes, and the most important reference books together with some instruction in the preparation of bibliographies. The course wil be a requirement of those students added to the library's staff of student assistants although it will not prepare the student to become a librarian.

Fall or Spring (2)

# MATHEMATICS

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in mathematics. Lower division requirements: Mathematics 3A-3B, 4A. Recommended: Two or more of the following: Astronomy 1; Economics 1A-1B; Commerce 2, Engineering 1A, 21; French A-B; German A-B; Physics 1A-1B or 4A-4B or 2A-2B-3A-3B. Upper division requirements: a minimum of 24 upper division units in mathematics, or 18 units in mathematics and 6 units selected from the following with approval of the Chairman of the Department: Astronomy 107; Chemistry 110A-110B, 144; Physics 105A-105B, 112; or other courses approved by the Chairman of the Department.

A *teaching major* is offered in mathematics for the general junior high school credential and for the general secondary credential. For specific information, refer tc the outline of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in mathematics. The minor must include at t 15 units of work in mathematics, 9 units of which must be from courses carrying er division credit.

A *teaching minor* is offered in mathematics for the general secondary, the general ior high school, the special secondary, the general elementary, and the kindergarten- nary credentials. For specific information, refer to the outlines of requirements for se credentials.

### Lower Division Courses

NOTE: Courses in mathematics may not be used to meet any part of the 12-unit ral science requirement.

**Basic Mathematics**

Fundamentals of algebra and arithmetic with applications to everyday problems. students who have had less than two years of high school mathematics or who re or need mathematics training in this area.

**Basic Mathematics**

Fundamentals of geometry including applications to everyday problems. For ents who have less than two years of high school mathematics or for students who re or need work in this area.

**Intermediate Algebra**

The course begins with an extensive review of elementary algebra. Topics red include quadratic equations, simultaneous equations, ratio and proportion, ation, arithmetic and geometric progressions, bionominal expansion and logarithms. equivalent to the second year-course in high school algebra. Prerequisites: Ele- tary algebra and geometry or Mathematics A-B.

Fall and Spring (3)

**Trigonometry**

Roughly equivalent to the high school course in plane trigonometry but with more tion than is often given to those aspects needed in analytic geometry and calculus. equisites: Intermediate algebra, Mathematics C.

Fall and Spring (3)

**Solid Geometry**

A course in solid geometry with much attention to the calculation of surfaces and mes for the simpler solids and for certain others used in industry. Prerequisites: rmediate algebra, Mathematics C.

Fall (2)

**Slide Rule**

Theory and use of the slide rule. Practice in performing the fundamental opera- of arithmetic. Some attention is given to more involved computations. Pre- isites: Trigonometry, Math. D.

Fall and Spring (1)

**College Algebra**

Review of algebra and trigonometry. New material includes identities, graphs, ion of algebraic and trigonometric equations, determinants, and mathematical s. Prerequisites: Two years of algebra and trigonometry.

Fall and Spring (3)

**Plane Analytic Geometry**

Equations and loci, conic sections, coordinate transformations, Cartesian and coordinates, and parametric representation. Prerequisites: Algebra, plane etry, intermediate algebra, and plane trigonometry, with a high degree of pro- cy, or a satisfactory grade in Mathematics 1, College Algebra. In order to mine the degree of proficiency, examinations in intermediate algebra and plane ometry will be given during the first week of the semester. Students falling below equired standard will be assigned to Mathematics 1.

Fall and Spring (3)

### 3B. First Course in Calculus

Introduction to differential and integral calculus, with applications to problem involving variable rates and summations. Prerequisite: Mathematics 3A.
Spring (3)

### 4A. Second Course in Calculus

Differentiation, integration, infinite series, and a brief treatment of solid analyti geometry. Prerequisite: Mathematics 3B. Solid geometry is recommended.
Fall (3)

### 4B. Third Course in Calculus

Partial differentiation, successive integration, and applications. Prerequisite Mathematics 4A.
Spring (3)

### 7A-7B. Mathematical Analysis

Designed for students who do not intend to prepare for a professional career i physical science or in engineering but who desire or need one year of college mathematics. Consideration is given to the processes and applications of algebra, trigonometry, and differential and integral calculus. Prerequisites: High school algebr and plane geometry. 7A is a prerequisite to 7B. Students with credit for Math 1 o 3A will not receive credit for 7A. Students with credit for Math 3B will not receiv credit for 7B.
Year course (3-3)

## Upper Division Courses

### 104. History of Mathematics

History of mathematics down to early modern times. Prerequisite: Mathematic 3A-3B or 7B.
Spring (3) (Offered in 1949-50 and alternate years)

### 105. College Geometry

A continuation of the geometry of the high school with emphasis on moder topics. Prerequisite: Mathematics 3B or 7B.
Fall (3) (Offered 1950-51 and alternate years)

### 106. Projective Geometry

Concurrence of lines, collinearity of points and other properties of figures no altered by projections; construction and study of ellipses, hyperbolas and parabolas b means of projections. Prerequisite: Mathematics 3A-3B or 7B.
Fall (3) (Offered in 1949-50 and alternate years)

### 111. Theory of Algebraic Equations

Determinants, complex numbers, and theory of algebraic equations. Prerequisites: Mathematics 3A and 3B or 7B.
Spring (3) (Offered in 1950-51 and alternate years)

### 112. Analytic Geometry of Space

The coordinate systems in space; lines, planes, and quadric surfaces; applications. Prerequisite: Mathematics 4A.
Spring (3) (Offered in 1950-51 and alternate years)

### 117. Intermediate Calculus

Essentially the same as Mathematics 4B with additional special work for advanced students. Prerequisite: Mathematics 4A. Credit not allowed for both 4B and 117.
Spring (3)

### 118. Advanced Mathematics for Engineering Students

Hyperbolic, elliptic, Bessel and gamma functions; line integrals; Fourier series, etc. Applications. Prerequisites: Mathematics 4A-4B. (4B concurrently if desired).
Fall (3)

**9. Differential Equations**

Ordinary differential equations of first and second order, with applications. Pre-
quisite: Mathematics 4A-4B (4B concurrently if desired).
Spring (3)

**1. Advanced Calculus**

Review of fundamental aspect of calculus, partial differentiation, multiple inte-
als and change of variable, series, line and surface integrals, Stokes' and Green's
orems, Beta and Gamma functions. Prerequisite: Mathematics 118 or 119.

**1. Vector Analysis**

Theory and applications to engineering problems. Prerequisites: Mathematics
-4B (4B concurrently if desired).
Fall (3)

**0. Probability and Statistics**

Statistical theory and method from the mathematical standpoint; applications in
ial and natural science. Prerequisite: Mathematics 4A or 7B.
Spring (3) (Offered in 1950-51 and alternate years)

**0. Special Study**

Study of materials mainly supplementary to the courses listed above. Prerequi-
: Average grade of B or better in at least 12 units beginning with Mathematics 3A.
Fall and Spring (1 or 2, each semester)

### Graduate Courses

**. Concepts of Geometry From an Advanced Point of View**

A course covering fundamental concepts of geometry and processes of mathemat-
l thinking in this area. Recommended for candidates for the general secondary cre-
tial.
(2)

**. Concepts of Algebra From an Advanced Point of View**

A course covering fundamental concepts of algebra and processes of mathematical
nking in this area. Recommended for candidates for the general secondary creden-
.
(2)

**. Advanced Work in the History of Mathematics**

Intensive study of specific phases of the history of mathematics with attention
mplications for teaching mathematics. Prerequisite: Mathematics 104.

## MUSIC

### IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is offered in music. Lower division requirements:
sic 1B-1C-1D, 4A-4B, 4 units of applied music (study of piano, voice, or orchestral
rument); Aesthetics 1A-1B. Upper division requirements: a minimum of 24 upper
sion units in music selected from the following: Music 105A-105B, 106, 107, 119A,
A, 121A-121B, 128; 4 units of applied music, Aesthetics 102A-102B, and 4 units
usic activity (Music 109, 110, 111, 112, 113, 114, 115, 125, 126, or 130). As labora-
work, each music major is required to carry one music activity per semester. It is
mmended that both vocal and instrumental activities be included at some time
ng the college course. At least a C average in upper division music courses
ecessary.

At least two months before graduation, each senior music major will present a
tal before the music faculty. At this time, the faculty will select those students who
to be granted the privilege of a public recital.

A *teaching major* is offered in music for the general secondary credential and the
ial secondary credential in music. For specific information, refer to the outlines of
irements for these credentials.

### Minor

A *minor in arts and sciences* is offered in music. The minor must include at least 1 units of work in music, 9 units of which must be from courses carrying upper divisio credit.

A *teaching minor* is offered in music for the general secondary, the general junio high school, and the special secondary credentials. It may be offered only as a secon teaching minor for the general elementary and the kindergarten-primary credentials For specific information, refer to the outlines of the requirements for these credentials

### Lower Division Courses

(Descriptions of courses in the field of music appreciation and history of musi are listed under *aesthetics.*)

**1A. Musicianship—Fundamentals of Music**

The elements of music; scale construction; elementary music theory; drill i music reading both with syllables and with words; ear training, elementary musi dictation. Basic course for all general elementary credential students. Music major receive no credit toward graduation. All music majors are required to register for Section 1, only.
Fall or Spring (3)

**1B. Musicianship—Music Reading and Ear Training**

Tonal and rhythmic dictation; rhythmic writing; sight singing. Basic course for majors and minors. Prerequisite: Music 1A.
Fall or Spring (2)

**1C-1D. Musicianship—Advanced Music Reading and Ear Training**

Tonal work in minor keys; modal scales; dissonant triads and seventh chords; interval feeling in all chords; rhythmic progression and elementary forms; rhythmic, melodic and harmonic dictation. Prerequisite: Music 1B. 1C is a prerequisite for 1D.
Year course (2-2)

**2A. String Instruments**

Beginner's class in violin, viola, 'cello and string bass. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.
Fall or Spring (1)

**3A. Woodwind Instruments**

Beginner's class in oboe, clarinet, flute and bassoon. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.
Fall or Spring (1)

**4A-4B. Elementary Harmony**

Scale construction, intervals, by-tones and diatonic harmonies. Transposition and original composition in the simpler forms. Prerequisites: Music 1A-1B, or the equivalent, and at least one year of piano study. 4A is a prerequisite for 4B.
Year course (3-3)

**5A. Percussion Instruments—Drums**

Snare drum, bass drum, cymbols and small instruments of percussion group techniques from beginning work through all phases of concert and marching band requirements.
Fall or Spring (1)

**5B. Percussion Instruments—Mallet Played**

Necessary technique and applied elementary theory to prepare the student in the fundamentals of playing the Tympani, Glockieuspiel, Xylophone, Marimba, Vibraphone, Orchestra Bells and Chimes.
Fall or Spring (1)

**. Brass Instruments**

Beginner's class in trumpet, French horn, baritone, trombone and tuba. Required all music majors working for a Special Secondary credential unless this orchestral tion is the major or minor field.
Fall or Spring (1)

**. Music Materials for the Elementary School**

Study of the song material in the state music texts and in the supplementary ts. Appreciation materials applicable to the elementary school. Required course for general elementary credential students. Prerequisite: Music 1A.
Fall, Spring and Summer I, II (3)

**-B-C-D. Treble Clef Sextette**

Members selected by auditions from Treble Clef (Music 10).
Fall and Spring (½-½)

**-B-C-D. Women's Glee Club—Treble Clef**

Entrance upon examination.
Fall and Spring (½-½)

**-B-C-D. Men's Quartet**

Members selected by auditions from Men's Glee Club (Music 12).
Fall and Spring (½-½)

**-B-C-D. Men's Glee Club**

Entrance upon examination.
Fall and Spring (½-½)

**-B-C-D. Orchestra**

Permission of the conductor required for membership.
Fall and Spring (1-1)

**-B-C-D. Vocal Ensemble**

Members selected by auditions from Choral Club (Music 15).
Fall and Spring (½-½)

**-B-C-D. Choral Club**

Entrance upon examination.
Fall and Spring (½-½)

**A-16B-16C-16D. Individual Study of an Orchestral Instrument**

Fall and Spring (1-1)

**A-17B-17C-17D. Individual Study of Voice**

Fall and Spring (1-1)

**A-18B-18C-18D. Individual Study of Piano or Organ**

Prerequisite: The ability to play artistically hymns and folk songs of the type nd in the Golden Book of Favorite Songs.
Fall and Spring (1-1)

**-B-C-D. Chorus**

Open to anyone interested in singing standard choral works. No examination uired. No public performances.
Fall and Spring (½-½)

**. Beginning Instrumental Ensemble**

Open to all instrumental students. Group playing of simple orchestral and band es. Prerequisite: Music 2A, 3A, 6A, or equivalencies, one or more.
Fall or Spring (½)

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* See explanation below for conditions under which credit may be given for music ly under private instructors.

### 24B. Intermediate Instrumental Ensemble

Construction of group performance of orchestral and band scores of mor advanced grade. Material covered will prepare the student for minor parts in eithe concert orchestra or symphonic band. Prerequisites: Music 24A or equivalent.
Fall or Spring (½)

### 25A-B-C-D. Marching Band

Permission of conductor required for membership.
Fall and Spring (1-1)

### 26A-B-C-D. Symphonic Band

Permission of the conductor required for membership.
Fall and Spring (1-1)

### 28A-28B. Piano

Fundamental playing and reading technics for the pianoforte. Emphasi upon playing by ear, and the development of interpretative ability. For beginners only No credit for music majors and minors.
Year course (1-1)

### 28C-28D. Continuation of First Year Piano

Study of more advanced piano literature. Considerable emphasis upon ensembl piano playing and accompanying. Prerequisites: Music 28A-28B, and consent o instructor. No credit for music majors. Credit will be given to music minors. 28C i a prerequisite for 28D.
Year course (1-1)

### 29A-29B. Class Voice

A class for beginners in the vocal field taking up the problems of breath control tone placement, articulation and enunciation. Frequent performance before clas required. Limited to 15. 29A or equivalent is a prerequisite for 29B.
Year course (1-1)

### 29C-29D. Continuation of First Year Voice

Study of more advanced songs with attention being given to interpretation, a well as continued work on tone, articulation and placement. Frequent performanc before class required. Limited to 15. 29C or equivalent is a prerequisite for 29D.
Year course (1-1)

### 30A-30B. Chamber Music

String and woodwind ensembles. The consent of the instructor necessary fo admission to class.
Year course (1-1)

## Upper Division Courses

(For description of courses in the field of music appreciation and history o music, see *aesthetics*).

### 105A-105B. Advanced Harmony and Composition

Study of the possible types of modulation and chromatic harmonies: continuatio of harmonic analysis and original composition. Prerequisite: Music 4A-4B. 105A is a prerequisite for 105B.
Year course (3-3)

### 106. Counterpoint

Study of the five species of counterpoint with much practice in writing in such forms. Application of contrapuntal style to modern composition. Prerequisite: Music 4A-4B.
Fall (2)

### 107. Form and Analysis

Aural and visual analysis of music forms through a consideration of structure, harmonic content, and style. Prerequisite: Music 105A-105B.
Spring (2)

**9A-B-C-D. Treble Clef Sextette**

Members selected by auditions from Treble Clef (Music 110).
Fall and Spring (½-½)

**0A-B-C-D. Women's Glee Club—Treble Clef**

Entrance upon examination. A maximum of 2 units in glee club may be counted ward the A.B. Degree.
Fall and Spring (½-½)

**1A-B-C-D. Men's Quartet**

Members selected by auditions from Men's Glee Club (Music 112).
Fall and Spring (½-½)

**2A-B-C-D. Men's Glee Club**

Entrance upon examination. A maximum of 2 units in glee club may be counted ward the A.B. Degree.
Fall and Spring (½-½)

**3A-B-C-D. Orchestra**

Permission of the conductor required for membership. A maximum of 4 units orchestra may be counted toward the A.B. Degree.
Fall and Spring (½-½)

**4A-B-C-D. Vocal Ensemble**

Members selected by auditions from Choral Club (Music 115).
Fall and Spring (½-½)

**5A-B-C-D. Choral Club**

Entrance upon examination. A maximum of 2 units in choral club may be unted toward the A.B. Degree.
Fall and Spring (½-½)

**16A-B-C-D. Advanced Individual Study of an Orchestral Instrument**

Fall and Spring (1-1)

**17A-B-C-D. Advanced Individual Study of Voice**

Fall and Spring (1-1)

**18A-B-C-D. Advanced Individual Study of Piano or Organ**

Fall or Spring (1-1)

**9A. Instrumental Conducting**

Conducting and reading of orchestral scores.
Fall or Spring (1)

**0A. Vocal Conducting**

The theory of vocal conducting together with practical experience gained from ecting the college chorus. Prerequisite: Upper division music major or minor.
Fall or Spring (1)

**1A-121B. Instrumentation and Arranging**

Arranging of music for full orchestra. Selected works of pupils to be performed by ndard orchestras. 121A is a prerequisite for 121B.
Year course (2-2)

**4A. Beginning Instrumental Ensemble**

Open to all instrumental students. Group playing of simple orchestral and band res. Prerequisite: Music 2A, 3A, 6A, or equivalencies, one or more.
Fall or Spring (½)

**4B. Intermediate Instrumental Ensemble**

Continuation of group performance of orchestral and band scores of more vanced grade. Material covered will prepare the student for minor parts in either ncert orchestra or symphonic band. Prerequisites: Music 24A or 124A, or equivalent.
Fall or Spring (½)

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* See explanation below for conditions under which credit may be given for music ıdy under private instructors.

**125A-B-C-D. Marching Band**

Permission of conductor required for membership.
Fall and Spring (1-1)

**126A-B-C-D. Symphonic Band**

Permission of the conductor required for membership. A maximum of 4 unit in band may be counted toward the A.B. Degree.
Fall and Spring (1-1)

**128. Methods in Teaching Piano**

Teaching of beginning intermediate and beginning piano. Survey of material available for child and adult classes. Special consideration of the problems of the adul beginner. Supervised teaching of beginning students in individual lessons and in clas groups.
Summer (3)

**130A-130B. Chamber Music**

String quintet and woodwind ensembles only. Permission of the instructor necessary for class membership.
Year course (1-1)

## Graduate Courses

**200A-200B. Special Problems in Music**

A graduate course in which students may carry out projects in various fields of music under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply for work within a certain field after conference with the music faculty. Prerequisite: Graduate standing.
Fall and Spring (2-2)

**Music 203. Musicology**

Survey of bibliography and methods of research in music history and literature. Emphasis upon inter-relationship of musical developments and trends in other arts. Completion of an acceptable thesis in fields of investigation chosen by the student. Prerequisites: Aesthetics 102A-102B, graduate standing and consent of the instructor. Advanced courses in Harmony, Composition, and Form and Analysis are desirable.
Fall (2)

**Music 206. Composition**

Music composition in the larger forms. Students will be required to submit a complete work in one of the larger musical forms as thesis in the course. Prerequisites: Music 105A-105B, 106A, 107A, 121A, graduate standing and consent of the instructor.
Spring (2)

## CONDITIONS UNDER WHICH CREDIT MAY BE GIVEN FOR MUSIC STUDY UNDER PRIVATE INSTRUCTORS

Credit may be allowed for private instruction in music under the following conditions:

1. The applicant for such credit must be a regularly enrolled student in the music department of the college.

2. The instructor giving such private work must be approved by the Music Department. All private work and the names of all such teachers must be registered in the office of the music department chairman at the beginning of the semester.

3. In the case of first semester private study, a placement examination conducted by the music department faculty at the beginning of the semester will show the status of the student at the beginning of his work.

4. Evidence that the standards of the Music Department have been met will be shown by an examination conducted by the music department faculty at the end of the semester.

5. Ten clock-hours of lessons, and 100 hours of practice per semester are required for one unit of credit.

# PHILOSOPHY

## IN THE DIVISION OF SOCIAL SCIENCES

*Major* work is not offered in philosophy.

### Minor

A *minor in arts and sciences* is offered in philosophy. The minor must include at st 15 units of work in philosophy, 9 units of which must be from courses carrying per division credit.

A *teaching minor* is not offered in philosophy.

### Lower Division Courses

NOTE: Courses in philosophy may not be used to meet any part of the 12-unit cial science requirement, nor may they be used as part of a social science major or inor.

**-1B. Introduction to Philosophy**

An exploration of the major problems of philosophy and some significant proaches to their solution. The treatment is primarily critical and analytic rather an historical. Through free class discussion, each student is encouraged to develop r himself a world-view which to him will seem most congenial and logical. Prerequsite: 1A is prerequisite for 1B.

Fall and Spring (3-3)

**-3B. History of Philosophy**

A historical account of the development of the major concepts of philosophers the western tradition. Relations of philosophy to science, art, religion, and social d political conditions. 3A covers the ancient and medieval periods, 3B the modern. is not prerequisite for 3B.

Year course (3-3)

**. Logic**

Logic and language. The logic of argument and proof. Analysis of fallacies. Applition of formal principles to scientific and everyday thinking.

Spring (3)

### Upper Division Courses

**1. Contemporary Philosophy**

The major philosophical issues, movements, and figures in American and Euroan philosophy of the twentieth century. Prerequisite: 3 units selected from Philosoy 1A, 1B, 3A, or 3B.

Spring (3)

**1A-111B. Theory of the State**

The nature of the state, its organization and activities, and its relation to the lividual and to other states. Special attention is given to recent developments in the ld of political thought. Not open to students with credit in Political Science 111A-1B.

Year course (3-3)

**0. Ethics**

The search for the Good Life. The principal theories of ethical obligation, the urces of moral authority, and the various views regarding the nature of the "highest od" and the related goals of intelligent living.

Fall (3)

**136. Philosophy of Art**

A study of the nature of esthetic experience, both in itself and in relation to the rest of human experience. Particular effort is made to disentangle man's esthetic attitude and activity (whether in the field of art, nature or daily life) from those experiences and evaluations with which the esthetic is frequently confused. The principal theories of art, both traditional and contemporary, are studied at length—both in relation to actual artistic production and to art's role in society.
Spring (3)

**137. Philosophy of Science**

A critical examination of the basic concepts and methods underlying contemporary scientific thought. Nature of scientific knowledge, conceptions of nature, natural law, relation of the scientific interest to other interests, and contributions of the special sciences to a view of the universe as a whole. Prerequisite: 3 lower division units in philosophy.
Fall (3)

# PHYSICAL EDUCATION

## IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

A *major in arts and sciences* is not offered in physical education.

A *general major* is offered in the field of recreation. For specific requirements, refer to the outline for the curriculum in recreation in the section on Preprofessional and Vocational Curricula, and for further information on the general major to the section on Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

A *teaching major* is offered in physical education for the general secondary and the special secondary credentials. Refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in physical education or in recreation. The plan for these minors must be approved by the departmental representative. A minor consists of at least 15 units of work in one field, 9 units of which must be from courses carrying upper division credit. For further information on the minor in recreation, refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

A *teaching minor* is offered in physical education for the general secondary, the general junior high school, and the special secondary credentials. It may be offered only as a second teaching minor for the general elementary and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

A *teaching minor in recreation* is offered only as a second minor for students majoring in physical education. Non-physical education majors may select recreation as a teaching minor for the general junior high school or the special secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### MEN'S DEPARTMENT

Candidates for a teaching credential in physical education should refer to the section on Admission to Teacher Education, and to the curriculum outline entitled: A.B. Degree with Special Secondary Credential in Physical Education.

With the exceptions listed, all lower division students must elect one or more courses each semester. Two units of activity credit must be offered for graduation. Exceptions: (a) veterans of World War II; (b) students over 25 years of age. Students carrying fewer than 12 units during any semester may postpone taking physical education, but not be exempted therefrom. No permanent excuses from required activity courses will be granted. The college physician, in conjunction with the chairman of the department, will consider stringent cases on an individual basis and recommend.

A medical examination is given each student when entering and recommendation nade as to type of activity most beneficial. Developmental physical education classes care for special needs are offered. The content of the required courses is planned give each student an opportunity to participate in many activities of carry-over ue, developmental nature, and recreational interest. An opportunity is afforded students to participate in competitive sports and intramural programs.

Freshmen are required to choose from courses numbered 1-10. Sophomores and per division students may choose from all courses offered. An activity course may taken for credit once only. The complete uniform will be furnished by the student.

## Lower Division Courses

### ACTIVITY COURSES

**-1B-1C-1D. Developmental Physical Education**
Fall and Spring (½-½-½-½)

**Basketball**
Fall and Spring (½)

**Boxing**
Fall and Spring (½)

**Gymnastics**
Fall and Spring (½)

**Soccer**
Fall (½)

**Softball**
Spring (½)

**Touch Football**
Fall (½)

**Track and Field**
Spring (½)

**9. Volleyball**
Fall and Spring (½)

**10. Wrestling**
Fall and Spring (½)

**13. Archery**
Fall and Spring (½)

**14. Badminton**
Fall and Spring (½)

**15. Fencing**
Fall and Spring (½)

**16. Golf**
Spring (½)

**17. Handball**
Fall and Spring (½)

**18. Tennis**
Fall and Spring (½)

### INTERCOLLEGIATE SPORTS

**Baseball**
Spring (½)

**Basketball**
Fall (½)

**Cross Country**
Fall (½)

**Football**
Fall (½)

**Golf**
Spring (½)

**30. Gymnastics**
Spring (½)

**34. Tennis**
Spring (½)

**35. Track**
Spring (½)

**36. Wrestling**
Spring (½)

## WOMEN'S DEPARTMENT

Candidates for a teaching credential in physical education should refer to the ion on Admission to Teacher Education, and to the curriculum outline entitled: . Degree with Special Secondary Credential in Physical Education.

With the exceptions listed, all lower division students must elect one or more rses each semester. Two units of activity credit must be offered for graduation. eptions: (a) veterans of World War II; (b) students over 25 years of age. dents carrying fewer than 12 units during any semester may postpone taking sical education, but not be exempted therefrom. No permanent excuses from required vity courses will be granted. The college physician, in conjunction with the chair- of the department, will consider stringent cases on an individual basis and mmend.

A medical examination is given each student when entering and recommendation nade as to type of activity most beneficial. Developmental physical education ses to care for special needs are offered. The content of the required courses is ned to give each student an opportunity to participate in many activities of y-over value, developmental nature, and recreational interest.

Freshmen are required to choose from courses numbered 1-10. Sophomores may se from all courses offered. An activity course may be taken for credit once . The complete uniform will be furnished by the student.

The individual activities, tennis, golf, archery, badminton, and dancing a offered through the year. Candidates for the special secondary credential in physic education must select one as a major activity and two others as minors. Skills in th activities must be maintained as prerequisite to the senior course, Physical Edu cation 185.

### Lower Division

### ACTIVITY COURSES

**1A-1B. Fundamental Skills**

Practice in efficient fundamental body movements.
Fall and Spring (½-½)

**2A-2B. Folk Dancing** (Men and Women)

(2A is a prerequisite for 2B)
Fall and Spring (½-½)

**3A-3B. Modern Dance**

Practice in dance techniques and rhythms.
(3A is a prerequisite for 3B)
Fall and Spring (½-½)

### TEAM SPORTS

**4. Fieldball, Soccer, Speedball**

Fall or Spring (½)

**5. Softball, Volleyball, Hockey**

Fall or Spring (½)

**6. Basketball**

Fall or Spring (½)

**11A-11B. Ballroom Dancing** (Men and Women)

(11A is a prerequisite for 11B)
Fall and Spring (½-½)

**12A-12B. Advanced Modern Dance** (Men and Women)

Laboratory experiments in advanced choregraphy and percussion accompan ment. Prerequisites: 3A and 3B.
Year course (1-1)

**13A-13B. Archery**

Fall and Spring (½-½)

**14A-14B. Badminton**

Fall and Spring (½-½)

**16A-16B. Golf**

Fall and Spring (½-½)

**18A-18B-18C. Tennis** (Beginning, intermediate, advanced)

(18A is a prerequisite for 18B; 18B is a prerequisite for 18C)
Fall and Spring (½-½-½)

**20A. Swimming** (Nonswimmers only)

Fall and Spring (½)

**20B. Swimming** (Intermediate)

Fall and Spring (½)

**21. Life Saving**

Learning of safety in and on the water and the ability to assist or rescue a perso in danger of drowning. Course content qualifies for the American Red Cross Lif Saving Certificate.
Fall and Spring (½)

## PROFESSIONAL THEORY COURSES

### Men and Women
### Lower Division Courses

**Professional Activities** (Men)

This course presents an opportunity for majors to develop the skills and tech- ues of the dance as well as other phases of the activity program. Organization and sentation of materials are emphasized.

Fall (2)

**Professional Activities** (Men)

Emphasis is placed on acquiring the skills, teaching techniques, and development nowledge and interests in the combative activities, tumbling, apparatus, and stunts.

Spring (2)

**First Aid and Safety Education**

The accepted procedure in meeting the emergencies which arise daily in any of many places where the physical education teacher is called on for first aid. Attention given to the prevention and minimizing of common accidents. Course contents lifies for American Red Cross Certificate.

Fall or Spring (2)

**Physical Education in the Elementary School**

The content of the State program in physical education for the elementary school ns the basis of the course. Candidates for the Elementary Credential are required ake the course section which includes two lectures and two laboratory periods per k.

Fall or Spring (2½)

Candidates for the Special Secondary Credential in physical education may take course section which includes two lectures without laboratory periods.

Fall (2)

**Introduction to Physical Education**

The history and principles of physical education and sports movements of the t. The aims and objectives of the modern school program are studied and an effort nade to give the student a basic philosophy or a background for his professional ning. Required of all physical education majors and minors.

For Men: Fall (2)
For Women: Spring (2)

### Upper Division Courses

**Professional Activities: Team Sports** (Men)

The skills, rules, teaching techniques, officiating, and organization of materials in n sports as soccer, touch football, softball, hockey, basketball, and others are hasized.

Fall (2)

**Professional Activities: Individual Sports** (Men)

The skills, rules, teaching techniques, officiating, and organization of materials in n sports as handball, tennis, badminton, archery, golf, and others are emphasized.

Fall (2)

**Professional Activities: Coaching Baseball and Track** (Men)

Organization of practice sessions, drills for developing fundamental drills and ial abilities. Problems of scheduling, handling teams and game strategy are taken Rules, sessions, and officiating techniques are given attention.

Spring (2)

**Professional Activities: Coaching Football and Basketball** (Men)

Organization of practice sessions, drills for developing fundamental skills and ial abilities. Problems of scheduling, handling teams, and game strategy are taken Rules, sessions, and officiating techniques are given attention.

Fall (2)

### 155. Applied Anatomy and Kinesiology

Anatomical and kinesiological analysis of human structure and movement Application of analysis relative to mechanical principles as influenced by efficienc factors of body functions. Prerequisite: Zoology 8 or 20.

Fall (3)

### 156A-156B. Sports Methods (Women)

Analysis of skills in basketball, hockey, soccer, speedball, volleyball, and softball methods of presenting sports to large groups; study of rules and officiating. Prerequisites: Physical Education 4, 5, and 6.

Fall and Spring (2-2)

### 160. Teaching of Body Mechanics (Women)

A study of efficient use of the body in daily living; evaluation and classification o exercises, methods, and practice in planning and presenting material.

Fall (2)

### 161. Folk Dancing Materials and Advanced Techniques (Women)

A study of folk customs, festivals, and costumes. Selection of dance material for various age groups. Practice in advanced techniques. Prerequisite: Physica Education 2A.

Fall (2)

### 164A-164B. Methods in Modern Dance

Methods in the teaching of modern dance techniques and choreography. Selectio of materials and course planning for the secondary school. Prerequisite: Physica Education 12A-12B.

### 165. Administration of Community Recreation

An introductory course in the principles of organization and promotion of leisur time and recreation activities. Content consists of a study of recreation leadership, th growth of the recreation movement, the operation of areas and facilities, program o activities, features, services, organization and administration problems. A require course for Recreation minors.

Fall (3)

### 168. Physiology of Exercise

A non-laboratory course emphasizing the relation of physiology to muscula exercise in physical activities. Prerequisites: Physiology 1A and Zoology 8 o equivalent.

Spring (3)

### 170. Recreational Leadership

A study of the practical application of the activities adapted to group recreatio programs. Activities include arts and crafts, special athletic events, drama, dancing music, hobbies, camping and hiking, socials, games and contests and stunts. Thi course is presented through lectures, discussions, field trips and actual class participation in the above activities. Required of all Physical Education majors, Physica Education and Recreation minors.

Spring (3)

### 177. Individual Program Adaptation

The adaptation of programs to the capacities and physical needs of individuals including analysis and evaluation of aims, techniques and procedures in developmental preventive and corrective measures. Special problems, such as survey of the situation recognition of divergencies, selecting and assigning of students, instructional problems motivation, follow-up, teacher limitations and public relations are considered. Prerequisites: P.E. 155 and senior standing.

Spring (3)

### 185. Techniques of Individual Sports (Women)

A course summarizing rules and teaching methods and testing individual playing techniques and knowledge in tennis, archery, badminton, and swimming. Prerequisite Senior standing.

Fall (1)

### Administration of Physical Education in the Secondary School

Consideration of the problems and practices in the organization and administra-
n of the secondary school activity program. Study and selection and adaptation of
ivities, examination, and grouping of pupils, use and evaluation of tests. Selection
l maintenance of equipment and facilities. Women must take this course only when
ered in the women's department.

For Women: Fall (3)
For Men: Spring (3)

### Special Study in Physical Education or Recreation

An opportunity is presented for extensive review of pertinent literature, indi-
ual research and advanced study of problems in the profession. Credit will range
m 1 to 3 units according to the caliber of work. Prerequisite: Approval of the
airman of the Division.

Fall or Spring (1 to 3)

## Graduate Courses

### Evaluation Procedures in Health, Physical Education and Recreation

A study of tests and measurements in the profession with practice in their use,
istruction and interpretation of results. Prerequisite: Graduate standing.

Spring (2) (Offered in 1948-1949)

### Developmental Physical Education

Intensive study of postural divergencies, lack of physical development, and
thods of correcting such conditions through exercise are studied. Practice in making
ysical examinations, constructing individual exercise programs, teaching remedial
rcises, as well as ethical procedures and limitations are considered. Prerequisite:
plied Anatomy and Kinesiology and graduate standing.

Fall (2)

### Problems in Physical Education

A survey of current problems facing the Physical Education profession is studied
ough a review of the literature, discussion of trends, observation of school situa-
ns together with the analysis and evaluation of actual problems. Written reports are
uired. Prerequisite: Graduate standing.

Summer 1949 (2)

### Problems in Recreation

A survey of current problems facing the Recreation profession is studied through
eview of the literature, discussion of trends, observation of school situations together
h the analysis and evaluation of actual problems. Written reports are required.
rerequisite: Graduate standing.

Summer 1949 (2)

# PHYSICAL SCIENCE

## IN THE DIVISION OF PHYSICAL SCIENCES

*Major* and *minor* work are not offered in physical science.

## Lower Division Courses

### Introduction to Physical Science

A survey course dealing with the nature of man's physical universe. Emphasis
l be upon materials chosen from topics in astronomy and physics to show the
ure and development of the scientific method and man's use of energy. Not open
students who have had a high school course in physics with grades of A or B or who
e credit for a college course in physics or astronomy or Physical Science 40. May
taken with or without plans to continue with 1B.

Fall and summer (3)

### Introduction to Physical Science

A continuation of Physical Science 1A. Emphasis will be upon units chosen
n geology and chemistry to show the origins of natural materials and their use
man in the modern world. Not open to students who have had a high school course
chemistry with grades of A or B or who have credit for a college course in either
mistry or geology. May be taken with or without credit in Physical Science 1A.

Spring (3)

# PHYSICS

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in physics. Lower division requirements Physics 1A-1B-1C-1D or 4A-4B-4C; Mathematics 3A-3B, 4A-4B; Chemistry 1A-1B o their equivalents. Recommended: A reading knowledge of French or German. Uppe division requirements: A minimum of 24 upper division units in physics includin Physics 105A-105B, 110A, 3 units chosen from 102 or 110B, and 199 (2 units). Six o the 24 units may be selected from a related field with approval of the Chairman of th Department.

A *teaching major* is offered in physics for the general secondary credential or a part of the *general science* major for the general junior high school credential or as par of the *physical science major* for the general secondary credential. For specific informa tion, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in physics. The minor must include at leas 15 units of work in physics, 9 units of which must be from courses carrying upper divi sion credit.

A *teaching minor* is offered in physics for the general secondary credential or a part of the *general science minor* for the general junior high, the special secondary the general elementary, and the kindergarten-primary credentials. For specific infor mation, refer to the outlines of requirements for these credentials.

### Lower Division Courses

Note: A maximum of 12 units of lower division physics credit may be applie toward the A.B. degree.

**1A-1B-1C-1D. Principles of Physics**

A four semester course developing the fundamental ideas which underlie th subject of physics, with applications in the discussion of practical problems. Thi course is designed for students in the various fields of science and engineering wh desire a thorough background of the elementary principles. Prerequisites: Concurren or previous registration in Mathematics 3A. Physics 1A is a prerequisite to Physic 1B, 1C or 1D. Students are expected to take the courses in the following sequenc and deviations from this may be made only with the permission of the instructor Each course provides two lectures and one three-hour laboratory period per week. Thi sequence of courses will be discontinued after the Spring semester, 1950. (See Physic 4A-4B-4C)

**1A. Mechanics of Solids**
Fall, spring, summer (3)

**1B. Mechanics of Fluids, Heat and Sound**
Spring, summer (3)

**1C. Electricity and Magnetism**
Fall (3)

**1D. Light and Atomic Physics**
Spring, summer (3)

**2A-2B. General Physics**

A year course covering the elementary principles of physics. This course is primarily for liberal arts and certain pre-professional students who do not desire an intensive preparation in the field. Lectures, demonstrations and discussions. First semester: Properties of matter, mechanics and heat. Second semester: Electricity and magnetism, sound and light. Prerequisite for 2A: Two years of high school mathematics. Prerequisite for 2B: Physics 2A.

Year course (3-3)

### -3B. Physical Measurements

A year course in laboratory physics designed to accompany Physics 2A-2B. rst semester: Properties of matter, mechanics and heat. Second semester: Electricity d magnetism, sound and light. One three-hour laboratory period per week.

Prerequisite for 3A: Concurrent or previous registration in Physics 2A. Pre- uisite for 3B: Concurrent or previous registration in Physics 2B.

Year course (1-1)

### -4B-4C. Principles of Physics

A three semester course developing the fundamental principles which underlie subject of physics, with applications in the discussion of practical problems. This irse is designed for students who desire a thorough background in introductory ysics. Each course provides three lectures and one three-hour laboratory per week.

#### 4A. Mechanics

The mechanics of solids and fluids. Prerequisites: Credit in Mathematics 3A, or concurrent registration with permission of the Chairman of the Department of Physics. Not open to first semester freshmen.

Fall or Spring (4) (Beginning Fall 1949)

#### 4B. Electricity

Magnetism, electricity and elementary electronics. Prerequisite: Physics 4A.

Fall or Spring (4) (Beginning Spring 1950)

#### 4C. Heat, Sound and Light

Heat and elementary thermodynamics, sound and light. Prerequisite: Physics 4B.

Fall or Spring (4) (Beginning Fall 1950)

## Upper Division Courses

### Basic Electronics

Principles of electron tubes and resistance loaded amplifiers. Negative feedback its application to regulated power supplies, cathode followers and direct coupled plifiers. Study of Class A and Class B power amplifiers. Prerequisites: Physics 1C B and Mathematics 4A.

Fall (3).

### Communications

Study of Class C amplifiers, oscillators, modulators and detectors. Amplitude frequency modulation, television systems. Transmission lines, antennas and electro- netic radiation. Students with credit for Engineering 104 may not receive credit for course. Prerequisite: Physics 102 or permission of the instructor.

Spring (3)

### A-105B. Analytical Mechanics

Treatment of the fundamental principles of Newtonian mechanics. First semes- Study of the statics and kinematics of particles and rigid bodies. Second ester: Study of the dynamical principles underlying linear and rotary motion of l bodies, with additional work in vibration and impact. Use of elementary vector lysis in solving of physical applications in mechanics. Students with credit in ineering 102A-102B may not receive credit for this course. Prerequisites: Physics 1B or 2A-2B or 4A; and a working knowledge of the calculus. Physics 105A is pre- uisite for Physics 105B.

Year course (3-3)

### Optics

A study of reflection, refraction and dispersion of light, with applications to cal instruments, followed by a survey of phenomena indicative of the physical ire of light, including interference, diffraction, polarization and spectral radiation. equisite: Physics 1D or 2B-3B or 4C.

Fall (3) (Offered in 1950-51 and alternate years)

### 107. Electrical Measurements

The theory and use of electrical measurements, including measurements of cu rent, voltage, power, resistance, capacitance, inductance, and the parameters resonant circuits. One hour of lecture and three hours of laboratory work per wee Prerequisites: Physics 1C or 2B-3B or 4B and a working knowledge of the calculus.
Spring (2)

### 108. Atomic Particles

A study of the experimental evidence for the existence of the elemental physic particles and their properties and of the physical concepts to which this experiment evidence has led. Prerequisites: Physics 1C or 2B-3B or 4B.
Spring (3)

### 110A. Principles of Electronic Circuits

Elements of the mathematical theory of steady and quasi-steady electric an magnetic fields with applications. Prerequisites: Physics 1C or 2B-3B or 4B and working knowledge of the calculus.
Fall (3)

### 110B. Electromagnetism

Extension of the material covered in Physics 110A, including alternating an transient current phenomena and electromagnetic radiation. Prerequisite: Physic 110A.
Spring (3) (Offered in 1950-51 and alternate years)

### 112. Heat and Themodynamics

A study of the thermal properties of matter with an introduction into the kineti theory of gases and the laws of thermodynamics. Prerequisites: Eight units in physic and a working knowledge of the calculus.
Fall (3) (Offered in 1949-50 and alternate years)

### 114. Acoustics

A study of wave motion and its applications to the production, transmission an reception of sound. Material in architectural acoustics, speech and hearing, and acoustical instruments is presented. Prerequisites: Physics 1C or 2B-3B or 4C.
Spring (3) (Offered in 1949-50 and alternate years)

### 122. Electronics Laboratory

An experimental study of electron tubes and their associated circuits. Study o the cathode ray oscilloscope, vacuum tube voltmeter, characteristics of power supplies, amplifiers and filter systems. One hour of lecture and three hours of laboratory work per week. Prerequisite: Previous or concurrent registration in Physics 102, o permission of the instructor.
Fall (2)

### 124. Radio Measurements

A laboratory course in measurements of the parameters of resonant circuits a radio frequencies. Study of the properties of oscillators, modulators, detectors and wave guides. Students with credit in Engineering 124 may not receive credit for this course. Prerequisite: Previous or concurrent registration in Physics 104.
Spring (2)

### 126. Optical Measurements

An experimental study of lenses, optical systems and instruments, including the study of the wave character of light and the measurement of the wave length of light. One hour of lecture and three hours of laboratory work per week. Prerequisite: Previous or concurrent registration in Physics 106, or permission of the instructor.
Fall (2) (Offered in 1950-51 and alternate years)

### 128. Experimental Atomic Physics

Laboratory measurements in the fundamental properties of atomic particles. Prerequisite: Previous or concurrent registration in Physics 108 or permission of the instructor.
Spring (2) (Offered in 1950-51 and alternate years)

### 2. Heat and Pyrometry Laboratory

Laboratory work selected from experiments in thermal expansion, specific heat, at of combustion, radiation, calibration and use of various temperature measuring ices. One hour of lecture and three hours of laboratory work per week. Prerequisite: evious or concurrent registration in Physics 112 or permission of the instructor.

Fall (2) (Offered in 1949-50 and alternate years)

### . Acoustical Measurements

Experimental study of wave motion, velocity of sound in various media, diffrac-n, refraction and reflection of sound, microphone and loudspeaker characteristics. e hour of lecture and three hours of laboratory work per week. Prerequisite: Previ- or concurrent registration in Physics 114 or permission of the instructor.

Spring (2) (Offered in 1949-50 and alternate years)

### . Vacuum Tubes

A study of the internal behavior of electron tubes with an introduction to electron ics; consideration of special tubes used in physics and engineering. Prerequisite: ysics 102.

Spring (2)

### . Honors Course

An individual study arrangement for students admitted to the Honors Group. ollment through the Department Chairman, subject to the approval by the Com-tee on Honors. For requirements for admission to this group, refer to The Honors up in the section on General Regulations.

Fall or Spring (Credit to be arranged)

### Special Study

Reading and laboratory work on a special problem in physics selected by the lent. Each student will be assigned a member of the staff who will supervise his k. All candidates for the A.B. Degree in physics are required to enroll for two s of this course during the upper division work. Credit, hours and topics to be nged in each case.

Fall and Spring (1 or 2—1 or 2)

## Graduate Courses

### Seminar

An intensive study of some phase of advanced physics under the immediate direc- of a member of the staff. Each student will choose a problem from one of the fol-ng fields for study and will prepare and present a paper to the combined staff and tudents enrolled in this course.

A. Mathematical Physics.
B. Theoretical Mechanics.
C. Kinetic Theory of Gases.
D. Advanced Acoustics.
E. Advanced Electronics and Electricity.
F. Electromagnetic Radiation.
G. Atomic Physics.

Prerequisite: Graduate standing.
Fall and Spring (2-2)

### Special Study

Independent theoretical and experimental investigation of some topic in physics en by the student. Each student taking work in this course will be required to write per reporting his results. A member of the staff will be assigned to supervise the . Prerequisite: Graduate standing.

Fall and Spring (1 or 2—1 or 2)

# PHYSIOLOGY

## IN THE DIVISION OF LIFE SCIENCES

*Major* and *minor* work are not offered in physiology. Courses in physiology, however, may be used as part of the major in zoology and are recommended as part of the lower division requirements for the major in psychology. For specific information, refer to these departments.

### Lower Division Courses

**1A. Human Physiology**

A lecture course considering the functions of the human body, and including a brief reveiw of the microscopic and gross anatomy of the structures discussed. Prerequisites: Elementary chemistry and high school or college biology or zoology. Three hours of lecture per week. Credit reduced to 2 units, for students having credit for Zoology 20.

Spring (3)

**1C. Human Physiology**

A study of the human functions through laboratory experiments and demonstrations. Prerequisites: Physiology 1A completed or in progress. Six hours of laboratory per week.

Spring (2)

### Upper Division Courses

**101. General Physiology**

Fundamentals of plant and animal functions. Two lectures and two laboratory periods per week. Prerequisites: Biology 10A-10B or Zoology 1A-1B and Chemistry 1A-1B or Chemistry 2A-2B.

Spring (4)

# POLITICAL SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in political science. This major consists of 36 units of work in political science and closely related work chosen from the fields of economics, geography, history, philosophy, psychology, and sociology. Under the direction of the Chairman of the Department, the 36 units will be distributed as follows:

(a) Required courses: Political Science 1A-1B and 71A-71B (one year-course of which should be taken in the lower division) and Political Science 199.

(b) Eighteen upper division units in political science distributed among two of the following groups: Group I: theory and government—courses numbered 100-139; Group II: administration—courses numbered 140-149; Group III: international affairs—courses numbered 150-179.

(c) Six units of upper division work selected from the related fields listed above, this work to be chosen under the direction of the Chairman of the Department and to be outside the field of the student's minor.

Students majoring in political science are advised to become as familiar as possible with the related fields listed above. Majors should have a reading knowledge of at least one foreign language.

A *teaching major* is not offered in political science; however, courses in political science may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in political science. The minor consists of 15 units of work, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in political science for the general secondary credential; however, courses in political science may be used as part of the *social science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. Refer to the outlines of requirements for these credentials.

## Lower Division Courses

### A. Introduction to Government

Theories and principles of government, with special attention to the problems reated by modern industrialism and population pressures.
Fall (3)

### B. Introduction to Government

A comparative survey of selected foreign governments: their constitutional priniples, political institutions, and governmental problems.
Spring (3)

### 1A-71B. Introduction to American Government and Politics

Semester I: Governmental organization in the United States; the federal ystem; the organization, powers and functions of the legislative, executive and idicial branches of the government; the relations between federal, state and local nits of government.

Semester II: Expansion of governmental functions and the development of eans of democratic control; an examination of the increased use of government as n instrument of social control; the history, motivation, methods and control of olitical parties; nominations, elections and minority groups; pressure politics.
NOTE: Not open to freshmen.
Year course (3-3)

## Upper Division Courses

### 01. American Institutions

A study of the principles of the Constitution of the United States of America, nd a survey of the political and social institutions which have developed under the onstitution.
Fall (3)

### 05. American Political Theory

A survey of the development of American ideas concerning political authority om the period of colonial foundation to the present time.
Fall (3)

### 1A-111B. Theory of the State

The nature of the state, its organization and activities, and its relation to the dividual and to other states. Special attention is given to recent developments in the ld of political thought. Not open to students with credit in Philosophy 111A-111B.
Year course (3-3)

### 0. Political Parties

A critical analysis of the political party as a part of the process of government; rty organization and activities; nominating and campaign methods; theories and nctions of the party system; party responsibility. Special emphasis will be placed on the function of the two-party system in American government.
Fall (3)

### 1. Basic Factors in American Politics

An analysis of American political, legal, economic, and social factors in their lation to our political system and the public interest.
Spring (3)

### 2. Propaganda and Public Opinion

A study of the forces which mold the American public mind, the practice of opaganda, a description and analysis of public relations, pressure groups and their ect in American public life.
Spring (3)

### 9A-139B. American Constitutional Development

A study of the work of the Convention of 1787 and of significant phases of nerican constitutional law. (Formerly Political Science 175A-175B.) Not open to idents with credit for History 172A-172B.
Year course (3-3)

### 140. Principles of Public Administration

A study of the function of administration in the government of the Unite States: administration in a federal state; relations between administration and th legislative and judicial branches of government; bureaucracy; administrative "legislation" and "adjudication"; administration and democratic controls. (Formerl Political Science 143A.)

Fall (3)

### 141. Organization and Procedure in Public Administration

An introduction to management in the administration of public affairs: detaile examination of the forms and purposes of administrative organization; types o government agencies, their purposes and effectiveness; internal management an control; interagency relationships; personnel administration; budgets and auditin as administrative control devices; methods of administrative action. (Formerl Political Science 143B.)

Spring (3)

### 142. State Government

A study of the political structure and its operation used in the carrying on of th functions exercised by the states; state-federal relations; state-local governmen relations; particular emphasis on California government.

Fall or Spring (3)

### 143. Municipal and County Government

A study of the organization and its operation used to carry into effect the functions assigned to local governmental units; particular emphasis upon local government in California.

Fall or Spring (3)

### 144. Introduction to Public Personnel Administration

An introduction to the field, giving general coverage of the problems involved i recruitment, placement, supervision, etc. of public employees. Prerequisite: Permission of instructor.

Fall (2)

### 145. Public Personnel Management

An advanced course involving detailed examination of management of personnel i public service. Prerequisite: permission of instructor.

Spring (2)

### 150A-150B. International Relations

An historical and analytical consideration of the basic factors—historic, geographic, economic, ideologic, and strategic—which underly and condition the moder conflict between the "sovereign state" and the "community of nations." Fall semester Origins and development through the nineteeenth century. Spring semester: Twentiet century experimentation and conflict.

Year course (3-3)

### 151SP. The Contemporary World

A series of lectures by members of the faculty on selected problems of the curren international scene. Reports required of students enrolled for credit.

Spring (1)

### 152. International Organization

A critical analysis of the organization by which the international communit seeks to provide for the exercise of legislative, administrative and judicial function on the international level: Diplomatic and consular corps; conferences; administration through commissions and unions; amicable procedures for settlement of disputes; The League of Nations-United Nations experiment. (Formerly part of Politica Science 141A-141B.)

Spring (3)

**53. Principles of International Law**

The function of law in the international community. The historical development f the ideas and rules of international law and their place in the modern diplomatic nd legal structure. (Formerly part of Political Science 133A-133B.)
Fall (3)

**54. International Law and the Courts**

A case study of the application of the rules of international law in national nd international courts. (Formerly part of Political Science 133A-133B.)
Spring (3)

**58A-158B. American Foreign Policy**

Lectures and reading in the field of American foreign relations since 1776, with pecial emphasis, in the second semester, upon affairs since 1900. A general survey ourse. (Formerly Political Science 176A-176B.) Not open to students with credit or History 176A-176B.
Year course (3-3)

**60. Government of the British Dominions**

Development of the new British Empire and imperial relations of the self-overning dominions; government of Canada, Australia, New Zealand, and South frica; conditioning historical, economic and racial factors. Not open to students with redit for History 156B.
Spring (3)

**98. Special Studies in Government**

Directed study and research in the field of government. Admission by permission f the instructor.
Fall or Spring (2-6)

**99. Special Studies in Political Science**

Directed study in research techniques in the field of political science. Limited to olitical Science majors.
Fall or Spring (2)

# PSYCHOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in psychology. Lower division requirements: Psychology 1, 10, and 11 or 12; 6 units in biology, zoology, or physiology; 6 units philosophy, anthropology, or sociology. Recommended: Mathematics C. Upper division requirements: a minimum of 24 upper division units in psychology including sychology 104A and 160A.

A *teaching major* is offered in psychology for the general secondary credential. efer to the outline of requirements for this credential.

### Minor

A *minor in arts and sciences* is offered in psychology. The minor must include at ast 15 units of work in psychology, 9 units of which must be from courses carrying pper division credit.

A *teaching minor* is not offered in psychology.

### Lower Division Courses

NOTE: Courses in psychology may not be used to meet any part of the 12-unit cial science requirement, nor may they be used as part of a social science major minor.

### 1. General

An elementary survey of normal adult psychology, descriptive and organizational the subjective and objective aspects of behavior. Furnishes basis for all other course in psychology and is prerequisite therefor.

Fall or Spring (3)

### 10. Advanced General Psychology

A comprehensive treatment of the fundamentals of psychology as the science o behavior and experience through a historical and an experimental approach. Require of all majors. Prerequisite: Psychology 1.

Fall or Spring (3)

### 11. Applied Psychology

A survey of the fields in which the basic principles of psychology may be applied An introduction to an interpretation of statistical data and its utilization in th application of psychological principles to problems of daily living. Required of al nonmajors who plan to take upper division courses in psychology. Prerequisite Psychology 1.

Fall or Spring (3)

### 12. Mental Hygiene

An examination and interpretation of the factors which go into the making o the person as he adapts himself to the social world about him. The development of th normal personality. Prerequisite: Psychology 1.

Fall or Spring (3)

## Upper Division Courses

### 104A. Statistical Methods in Psychology

An introduction to the use of quantitative methods in psychology, with emphasis upon measures of central tendency and variability, graphic methods and percentiles, linear correlation, and the applications of the normal probability curve. Prerequisite: Psychology 10, 11, or 12. Not open to students with credit for Economics 140 or Sociology 103.

Fall or Spring (3)

### 104B. Advanced Statistics

A further study of quantitative methods in psychology with particular emphasis on methods of correlation, chi-square, and contingency, and an introduction to the analysis of variance. Prerequisites: Mathematics C and Psychology 104A, or permission of the instructor.

Spring (3)

### 105A. Psychological Testing (Group)

A critical review of the principal intelligence, personality, aptitude and vocational interest tests, with emphasis upon problems of measurement in the various fields. Attention is given to procedures used in test construction and administration. Prerequisite: Psychology 11 or Psychology 104A.

Fall (3)

### 105B. Psychological Testing (Individual)

A course offering instruction in the principles of individual testing and practice in the administration of the Stanford-Binet, Wechsler-Bellevue and the more widely used individual mechanical aptitude tests. Prerequisite: Psychology 105A or Psychology 104A and consent of instructor.

Spring (3)

### 106. Developmental Psychology

A study of the psychological development of the normal individual from conception through childhood, adolescence, maturity, and old age. Stress is laid upon the interdependence of the various periods of the individual's life. Prerequisite: Psychology 1. Not open to students with credit for Psychology 102 or 103, or Education 102B or 102C, or Home Economics 102.

Fall or Spring (3)

### 21. Personnel and Industrial Psychology

Psychological principles applied to problems of selection and assignment of ndustrial personnel, employee training, and fatigue. Prerequisite: Psychology 104A, r Economics 140, or Sociology 103.

Fall or Spring (3)

### 22. Measurement of Public Opinion and Attitude

A survey of the history, methods, and problems of public opinion and attitude neasurement. Emphasis will be placed upon the polling of consumers and voters. In rder to give students experience in field work, they will be asked to serve as interiewers in several community investigations. Prerequisite: Psychology 11 or 104A, r Economics 140, or Sociology 103.

Spring (3)

### 30. Educational Psychology

A study of the science of human behavior as it relates to learning. Emphasis is iven to the principles of learning and maturation of the organism. Special aspects reated are the growth of meanings, thinking, memory and habit formation, motivaion, transfer of learning, organic and environmental conditions affecting learning, ndividual differences, and the theory of audio-visual education. Not open to students ith credit in Education 130. Prerequisite: Psychology 1.

Fall or Spring (2)

### 31. Psychological Foundations of Personality

The nature of the human organism, its interaction with social and material timuli in the environment, and the resultant changes in the development of the personality. Methods of studying and evaluating personality. A study of concepts that are asic in the development of a genuine mental hygiene. Course designed for persons ngaged in social work or similar professions. Prerequisite: One full year of psychology r equivalent.

Fall (2)

### 32. Problems of Personality Adjustment

A study of the application of the fundamental principles of personality to probems of adaptation. Included will be such topics as the mental hygiene of the infant, the hild, and the adolescent, and mental hygiene in relation to school, home, marriage, eligion, vocational selection and occupational adjustment, and the adjustment probems of war veterans. Prerequisite: Psychology 131 or permission of instructor.

Spring (2)

### 40. Physiological Psychology

Topics covered include the history of physiological psychology, neurophysiology ith emphasis upon integrative activities, receptor and effector processes, and the fects of hormones and narcotics upon behavior. Prerequisite: Psychology 10, 11 or 12 nd Physiology, Biology or Zoology.

Spring (3)

### 45. Social Psychology

Personality as it develops in relation to social environment. Suggestion, imitation, adership, the crowd, public opinion, social control, prejudice, propaganda, sex differnces, race differences, etc. Prerequisites: Psychology 11 or 104A.

Fall (3)

### 50. Abnormal Psychology

The relation of psychology to the psychoneuroses and insanity; the appearance abnormal traits in incipient stages of mental disturbances. Methods of diagnosis nd early treatment. Prerequisites: Psychology 10, 11, or 12 and Physiology, Biology Zoology.

Fall or Spring (3)

### 151. Introduction to Clinical Appraisal

A study of diagnostic devices in psychology, tests of clinical significance, ratings interviewing for securing information, projective and case study analyses; problem of insight, rapport, empathy, and prediction of individual behavior. Prerequisites Psychology 105A, 105B, 140, or 150.
Fall (3)

### 152. Introduction to Methods of Counseling

An introduction to problems and methods of counseling and adjustment. Th utilization of psychological principles and techniques in dealing with various types o guidance situations. Prerequisite: Psychology 151 or consent of instructor.
Spring (3)

### 160A-160B. Experimental Psychology

An experimental approach to the fundamental principles of psychology. The firs term deals with the fields of memory and learning, including conditioning, problem solving, and thinking. The second term deals with the sensory and motor processes including such topics as errors of perception, work and fatigue. Two laboratory sessions and one hour of lecture each week. Laboratory work includes group and individua experiments, demonstrations of classical experiments, and extensive readings. Prerequisites: Psychology 10 and 104A. Either semester course may be taken independentl of the other.
Fall and Spring (3-3)

### 166. Honors Course

A special study arrangement for students admitted to the Honors Group. Enrollment through the Department Chairman, subject to approval by the Committee o Honors. (See The Honors Group under General Regulations.)
Fall or Spring (Credit to be arranged)

### 170. Comparative Psychology

A study of the behavior of animals with a view to gaining a better understanding of human behavior. An analysis of the leading experimental work on sensory discrimination, learning, and intelligence of each animal group, from amoeba to man Prerequisites: Psychology 1 and 10.
(3)

### 199. Individual Studies in Psychology

Limited to students in the senior year. Permission to enroll must be obtained from a member of the staff. Credit limited to three units.
Fall or Spring (1-3)

## Graduate Courses

### 200. Seminar

The application of the findings of recent published research. Each student will select a problem for intensive study and discussion. Enrollment limited to graduate students who are candidates for the General Secondary School Credential with a major in Psychology.
Spring (2)

# SOCIOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in sociology. Lower division requirements: Sociology 50A-50B. Upper division requirements: a minimum of 24 upper division units in sociology, including Sociology 103, 105, 108 and 152.

A *teaching major* is not offered in sociology; however, courses in sociology may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in sociology. The minor must include at least 15 units of work in sociology, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in sociology for the general secondary credential; however, courses in sociology may be used as part of the *social science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**50A. Introduction to Sociology**

A study of modern social problems recognizing the geographic, economic, psychological, and sociological factors involved. Emphasis is on a scientific method of approach. An evaluation of various causes and solutions of problems is made. A prerequisite for upper division courses in sociology. Sophomore standing required. Not open to students who have credit for Social Science 40.
Fall or Spring (3)

**50B. General Sociology**

The development and use of the concepts of sociological analysis, such as human nature, the effects of isolation and social contacts upon the development of personality; social interaction; social processes; social forces; social control; collective behavior; and social progress. A prerequisite for upper division courses in sociology. Sophomore standing required.
Fall or Spring (3)

### Upper Division Courses

**03. Elementary Social Statistics**

Analysis and presentation of elementary material in the fields of sociology and social work. Tabular and graphic presentation, analysis of frequency distributions, trends, simple correlation, sampling and reliability techniques. Prerequisites: Mathematics A-B and Sociology 50A-50B. Mathematics C or 7A recommended. This course s a prerequisite for most upper division sociology courses. Not open to students who have credit for Economics 140 or Psychology 104A or 104B.
Fall or Spring (3)

**05. Social Pathology**

A study of the alleged abnormal phenomena in society; family disorganization nd personal demoralization; pathology of individual and group relationships and of conomic, social, and cultural relationships. Prerequisite: Sociology 50A-50B.
Spring (3)

**06. Criminology and Penology**

The extent and characteristics of crime; consideration of physical, mental, economic, and sociological causes of crime; study of methods of penal discipline, prison abor, parole, and probation; programs of prevention. Prerequiste: Sociology 50A-50B.
Fall (3)

**107. Juvenile Delinquency**

A study of the causative factors of antisocial behavior from the viewpoints o economics, psychology and sociology. Particular emphasis will be placed upon the influence of the school, home and neighborhood. Protective and remedial measures such a the Visiting Teacher, Juvenile Court, Probation, Parole and Reformatories will b studied. Prerequisite: Sociology 50A-50B.

Spring (3)

**108. Marriage and the Family**

Preparation for marriage. Prediction scales for evaluating success or failure i marriage. Parent-child relationships; factors in successful and unsuccessful marriages higher education and the birth rate; married women in industry and professions; desertion and divorce. Not open to students who have credit for Sociology 45 or 55, or Hom Economics 108. Prerequisite: 60 units of credit.

Fall or Spring (3)

**109. Fields of Social Work**

A survey of the nature of social work and the various kinds of social work whic are found in the modern urban life. The student is familiarized with the various socia agencies in the community, their problems and methods of work, by readings and fiel trips. Volunteer social work in some social agency recommended. Prerequisites: Sociology 50A-50B and 103.

Spring (3)

**110. Race Relations**

A study of the Negro, Oriental, and other minority groups in the United States A study of mental capacities, education, cultural achievement, family life, delinquency and other social factors of each group. Race prejudice, racial consciousness, theories o racial superiority and inferiority will be considered. Prerequisite: Sociology 50A-50B

Fall (3)

**115. Population Problems**

Problems of population increase, migration, shifts in composition of population relative to age, sex, and racial distribution. Population practices and theories. Biological and geographical aspects of population problems. International population movements. Prerequisite: Sociology 50A-50B and 103.

Spring (3)

**152. History of Social Thought**

The origin and development of social theory in Europe and America; consideration of the fields and specialization and research in contemporary American sociology. Prerequisite: Sociology 50A-50B.

Spring (3)

**195. Community Welfare Organization**

An analysis of the structure and process of community organization for social welfare as well as the functional relationships between public and private welfare agencies. Field work will be required to study some of the social agencies of San Diego. Prerequisite: Sociology 50A-50B and Sociology 103.

Spring (3) (Offered in 1949-50 and alternate years)

**197. Urban Sociology**

A study of the structure and function of the modern city; types of neighborhoods; forms of recreation; social forces in a metropolitan area; types of urban personalities and groups; rural-urban conflicts of culture. Practical field studies required. Prerequisite: Sociology 50A-50B and 103.

Fall (3)

# SPANISH

## IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *major in arts and sciences* is offered in Spanish. Lower division requirements: Spanish A-B-C-D; French A-B or German A-B or Latin A-B; History 4A-4B or 8A-8B. Upper division requirements: a minimum of 24 upper division units, at least 21 units of which must be in Spanish, including Spanish 199. The remaining 3 units may be selected from Geography 116, 118; History 161, 162; or Comparative Literature 155 or 158 in consultation with the departmental representative. An average grade of C or better in upper division major courses is required.

A *teaching major* is offered in Spanish for the general junior high school credential. For specific information, refer to the outline of requirements for this credential.

### Minor

A *minor in arts and sciences* is offered in Spanish. The minor must include at least 15 units of work in Spanish, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in Spanish for the general secondary, the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credential. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**A-B. Elementary**

Intensive study of Spanish grammar and syntax, with daily written work; class drill in conversational idiom and pronunciation; reading with oral discussion and résumés; dictation; introduction to contemporary prose writers. Credit not given for Spanish A unless followed by Spanish B. Students who have had one year of Spanish in high school should register for Spanish A for which only two units will be allowed. Those who have had two years of Spanish in high school should register for Spanish B for which only four units will be allowed. For specific information, refer to page 17. Spanish A, or its equivalent, is a prerequisite to Spanish B.

Year course (5-5)

**C-D. Intermediate Spanish**

Reading and composition: study of standard prose as basis for class work; collateral reading in prose and drama, with written reports in Spanish; dictation. Class work conducted mainly in Spanish. Individual conferences. Prerequisite for C: Spanish B or three years of high school Spanish. Prerequisite for D: Spanish C or four years of high school Spanish.

Year course (3-3)

**50. Spanish Commercial Correspondence**

A one-semester intermediate course in Spanish composition, directed along the ine of commercial correspondence. A practical course, with translation of business etters, and supplementary reading in Spanish on commercial subjects. Prerequisite: Three years of high school Spanish, or completion of Spanish B. This course may substitute for Spanish C in the C-D sequence.

Fall (3)

**70. Spanish for Elementary-School Teachers**

Elementary Spanish to meet the needs of elementary-school teachers. Emphasis on the oral aspects of the language with reading centering around Mexico. Open only to students enrolled in the general elementary school curriculum. Prerequisite: Two years of high school Spanish or one year of college Spanish or permission of instructor.

Spring (3)

## Upper Division Courses

### 101A-101B. Conversation and Composition

Translation into Spanish of moderately difficult English prose passages. Free composition in Spanish. Outside reading of modern Spanish plays, with written reports in Spanish. Oral practice in colloquial Spanish with extensive use of phonograph recordings. Prerequisite: Spanish D, or its equivalent, with grade of C.

Year course (3-3)

### 102A-102B. Introduction to Spanish Classics

Reading from several types of classical literature. Lazarillo de Tormes and other novels of Roguery; selections from Don Quixote, and the Cien Mejores Poesias Castellanas; one drama each from the works of Lope de Vega, Calderon, Alarcon, and Moreto; collateral reading and reports. Prerequisite: A grade of C in Spanish D or permission from the instructor.

Year course (3-3)

### 104A-104B. Spanish-American Literature

Reading from representative Spanish-American authors during the colonial revolutionary and modern periods. Lectures, class reading, collateral reading and reports. Prerequisite: A grade of C in Spanish D or permission from the instructor. Students who do not read Spanish may take this course for credit in comparative literature, doing the required reading in English translation.

Year course (3-3) (Offered in 1950-51)

### 105A-105B. Modern Spanish Drama

The development of the drama of Spain from the beginning of the nineteenth century to the present time. Prerequisite: A grade of C in Spanish D or permission from the instructor.

Year course (3-3) (Offered in 1950-1951)

### 110A-110B. Novel and Short Story in Spain

The development of the novel and short story in Spain from 1830 to the present time. Prerequisite: A grade of C in Spanish D or permission from the instructor.

Year course (3-3) (Offered in 1951-52)

### 199. Comprehensive Reading and Survey Course

Designed to fill up the gaps in the reading done in courses. Class meeting once a week for guidance, reports, and quizzes. Required of all seniors majoring in Spanish.

Spring (3)

## Graduate Courses

### Spanish 201. Old Spanish

A study of the language and literature of Spain from the 12th to the 15th centuries. Prerequisite: Graduate standing and permission of instructor.

Fall (2)

### Spanish 202. Seminar in Spanish-American Literature

Intensive investigation of some phase of Spanish-American literature. A single country, an author, or some special problem will be studied and reported upon. Prerequisite: Graduate standing and permission of instructor.

Spring (2)

# SPEECH ARTS

## IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *major in arts and sciences* is offered in speech. Lower division requirements: A minimum of 15 units of lower division courses in speech arts, specializing in the field of dramatic art, radio, public speaking or a guided combination of the three. Upper division requirements: a minimum of 24 upper division units including Speech Arts 150; 6 units selected from 155, 140A-140B, 179A-179B, 192A-192B (the first semesters of any of these courses may be combined); 6 units selected from 181, 182, 183 or 184, 159A-159B, 161 and 191, or combinations of the first semesters of any of these courses; 6 units selected from 152, 154A, 154B, 108, 118A, 176, 192A, 192B.

A *teaching major* is offered in speech for the general secondary and the special secondary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in speech. The minor must include at least 15 units of work in speech arts, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in speech for the general secondary, the general junior high school, and the special secondary credentials. It may be offered only as a second teaching minor for the general elementary and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1. Voice and Diction**

Exercises and drills to improve the quality, flexibility and effectiveness of the speaking voice leading to good usage in standard American speech. Preparatory to further courses in public speaking and dramatic art.

Spring (3)

**2A. Fundamentals of Public Speaking**

Training in fundamental processes of oral expression; method of obtaining and rganizing material; outlining principles of attention and delivery; extemporaneous speaking and open forum debating; practice in construction and delivery of type forms f speech.

Fall or Spring (3)

**2B. Extemporaneous Speaking (or Forum Speaking)**

Practice in extemporaneous speaking on subjects of current interest, both national nd local, with stress laid on the organization and delivery of content material. Forum iscussion will provide speakers with the opportunity of assembling facts quickly to eet such questions as any audience situation might demand.

Fall or Spring (3)

**11A. Interpretation**

Application of the principles involved in "making words come alive": response o thought and mood, sensory association, emphasis, climax. Practice selections in oetry and prose.

Fall or Spring (3)

**11B. Interpretation**

Application of techniques of interpretation to poetry of various types: ballads, des, sonnets, dramatic monologues, free verse. Prerequisite: 11A, or equivalent.

Fall or Spring (3)

**0. Remedial Speech**

Corrective laboratory training prescribed on the basis of vocalization tests made n recording machine. Required of education majors who fail to meet speech requirements tests. Private assistance given to stutterers and lispers.

Fall or Spring (1)

**55A-55B. Elementary Acting**

The fundamentals of voice and pantomime applied to the problems of characterization in group scenes in modern plays. The aims of this course include the discovery and development of talent and the understanding of the problems of the actor for directors and teachers. Acting experience is available in workshop productions and also in the major productions of the department. (Speech Arts 55A prerequisite for Speech Arts 55B).

Year course (3-3)

**56A-56B. Dramatic Production**

A general survey of the process of play production for lower division students planned to introduce them to the whole organization of the college and school theater, with particular emphasis on back-stage methods and practice, including stagecraft and elementary lighting. Technical crews for the departmental productions are taken from this class. (56A is a prerequisite for 56B.)

Year course (3-3)

**60A-60B. Argumentation and Debate**

Obtaining and organizing of evidence and the construction and use of the brief; study and discussion of current issues; the presentation of formal and informal debates. Attention to intramural and intercollegiate debating.

Year course (3-3)

**61A-61B-61C-61D. Intercollegiate Debate**

Fall or Spring (1-1-1-1)

**63A-63B-63C-63D. Verse Choir**

Participation in verse speaking chorus to develop quality, range of tone, and ability in dramatic visualization of poetry.

Fall or Spring (1-1-1-1)

**81. Survey of Radio**

A course presenting the background, theory, and fundamentals of radio broadcasting. The subject material includes history of broadcasting; types of radio programs; broadcast operation.

Fall or Spring (3)

**82. Radio Announcing**

The fundamentals of radio announcing. Class time will be divided between lecture and laboratory practice of announcing styles. Voice training for radio will be stressed. Prerequisite: Speech Arts 81.

Fall or Spring (3)

**83. Radio Acting and Directing**

For students interested in the production of dramatic radio programs. Lecture and laboratory for radio techniques in characterization. The use of sound effects and music cues and bridges will be considered. Emphasis will be on production analysis. Actors for Radio Guild productions will be taken from this class. Prerequisite: Speech Arts 81.

Spring (3)

## Upper Division Courses

**108. Advanced Interpretation**

Analysis of techniques of literary composition as guides to oral interpretation. Achievements of the creative artist as they affect the interpretative artist. Prerequisite: 11A or 11B or permission of instructor.

Fall or Spring (3)

**118A-118B. Playwriting**

The first semester of this course deals with the one-act play, its problems and technique. A number of one-act plays are analyzed and creative writing in this medium is encouraged. Plays written by the students are read and discussed in class during their period of development. Students will have an opportunity to see their plays produced. The second semester continues with analyses of long plays and assumes that the students are planning a continuous program of writing. (118A is a prerequisite for 118B or permission of instructor.)

Year course (3-3)

### 140A-140B. Stage Design

The application of the principles of design, color and perspective to the design f settings for the production of period and modern plays. Students will learn to make ketches and models and paint the scenery for the departmental productions. Prerequiite: 56A-56B or equivalent.
Year course (3-3)

### 145. Stage Lighting

A course for directors, designers and technicians in school and community theaers concerning the principles and practice of light, color, lighting instruments, and ontrol equipment, including the design and planning of lighting of plays. Students will erve as light crews for departmental production.
Spring (3)

### 50. Phonetics

Auditory and kinesthetic analysis of the sounds of the English language. Valuble as a corrective course in pronunciation and articulation. Required of speech majors nd those seeking the Speech Correction Credential.
Fall (3)

### 52. Stage Costume

Principles of design of stage costume. Consideration of materials, color, and dyeng. Study of history of costume of important periods. Projects in design of costumes or plays of various periods.
Fall (2)

### 54A-154B. History of the Theater

A study of the theater from primitive times to the present. Special attention will e given to the theater as a mirror of the social and cultural background of the various ountries and periods in which it is studied. Carries aesthetics credit. (Speech Arts 54B may be taken without 154A.)
Year course (3-3)

### 55. Advanced Acting

Problems in characterization: acting styles of the Elizabethan and Eighteenth entury periods. Prerequisite: 55A-55B or the equivalent.
Fall (3)

### 56. Advanced Dramatic Production

Problems and projects in scenery and lighting in connection with the workshop nd major productions of the department.
Offered in summer session only (3)

### 59A-159B. Stage Direction

This course is planned for prospective directors of plays in schools, colleges and mmunity theaters. Through lectures, discussions, and exercise projects the student ill become acquainted with the principles, procedure and methods of stage direction. ach student will be required to direct several short plays during the year (159A is a erequisite for 159B.)
Year course (3-3)

### 1A-161B-161C-161D. Advanced Intercollegiate Debate

Fall and Spring (1-1-1-1)

### 2. Advanced Argumentation

Presents a further and more detailed study in the preparation of briefs and the ganizing of evidence; opportunity for participation in intramural debates, interllegiate debate, and community speaking activity. Prerequisite: 2A or 2B.
Fall (3)

### 3A-163B-163C-163D. Advanced Verse Choir

Participation in verse speaking chorus to develop quality, range of tone, and ility in dramatic visualization of poetry.
Fall and Spring (1-1-1-1)

**176. Problems of Speech Correction and Articulation**

Analysis and discussion of the major articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Not open to students with credit for Education 176.

Spring (3)

**179A-179B. Nervous Speech Disorders**

Clinical survey of newest methods of speech correction with special emphasis given to stammering. Required course for Special Corrective Credential. Not open to students with credit in Educ. 179A-179B. (Speech Arts 179A is a prerequisite for 179B.)

Year course (3-3)

**181. Radio Sales and Advertising**

A study of advertising trends in radio advertising; time buying, audience surveys, and program types in relation to products to be advertised via radio broadcasting. Includes publicity and promotion of radio programming organization of a radio station; relationship between the business and entertainment factors of radio broadcasting. Open to students with consent of instructor.

Fall or Spring (3)

**182. Advanced Radio Production**

Advanced radio production techniques. Students are responsible for the execution of Radio Guild productions. Projects in program types include the use of sound and music. Material includes production analyses and script editing. Prerequisite: Speech Arts 83.

Spring (in alternate years) (3)

**184. Radio Writing**

Includes original half-hour scripts, play or novel adaptations for radio, and the documentary program. Study of pacing and timing, the use of sound and music for bridges and cues, and radio format. Plays written by students are read and discussed during their development; the better plays to be produced by the Radio Guild for broadcast. Open to students with consent of instructor.

Spring (3)

**191. Organized Discussion**

Consideration of the symposium, the panel, the open forum, the business session, and varieties of conference speaking. Emphasis upon organization and presentation. Attention to parliamentary procedure for informal groups. Prerequisite: Speech Arts 60 or equivalent.

Spring (3)

**192A-192B. Advanced Public Speaking**

Careful attention given to the preparation and delivery of longer speeches, using as models classics in the field of oratory. Prerequisite: 2A or 2B.

Year course (3-3) (Not offered 1948-1949)

**199. Special Problems in Speech and Dramatic Art**

Fall or Spring (1-3)

## Graduate Courses

**200. Seminar in History of Oratory**

An advanced course for those already familiar with the techniques and theories of public speaking and debate. A history of public address from the time of Greece up to the present, organized around the theories of representative orators and their relationships to the social environment. Prerequisite: Graduate standing.

Spring (2) (Offered in 1949-1950)

**221. Articulatory Problems of Speech**

Analysis and discussion of articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Prerequisite: Speech Arts 150 and graduate standing.

Fall (2)

### 45. Seminar in Technical Practice

Advanced technical projects in planning school theaters and their mechanical quipment, lighting control and lighting instruments and the design of lighting layouts r elaborate plays will be assigned, executed and discussed. Prerequisite: Graduate tanding.

(2)

### 59. Seminar in Stage Direction

An advanced course for those who are ready to direct full-length plays and to onsider the problems of handling various styles and types of drama in the great periods f dramatic literature for modern production. For graduates with experience in direct- g plays. Prerequisite: Graduate standing.

Fall (2) (Offered 1949-1950)

### 60. Seminar in Oral Interpretation

Application of the aesthetic discipline to the oral reading of masterpieces of poetry nd prose. Projects will include analysis of thought and emotional content and aesthetic rm, including unity and harmony, variety and contrast, balance and proportion, ythm, and the interpretation to an audience of the results of the study. Prerequisite: raduate standing.

(2)

# ZOOLOGY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in zoology. Lower division requirements Zoology 1A-1B; Chemistry 1A-1B or 2A-2B. Recommended: German or French; Bot any 2A-2B, 4. Upper division requirements: a minimum of 24 upper division units, a least 18 units of which must be in zoology and 6 units of which may be in relate courses in botany, chemistry, physics, physiology, or bacteriology selected with approva of the departmental representative.

A *teaching major* is not offered in zoology; however, courses in zoology may b used as part of the *life science major* for the general secondary credential or as part o the *general science major* for the general junior high school credential. For specifi information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in zoology. The minor must include at leas 15 units of work in zoology, 9 units of which must be from courses carrying uppe division credit.

A *teaching minor* is not offered in zoology; however, it may be used as part of th *teaching minor in life science* for the general secondary credential, or as part of th *teaching minor in general science* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specifi information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. General Zoology**

An introduction to animal biology dealing with structures, functions, evolution o animal life. Designed primarily for those who expect to do advanced work in the department. Two lectures and 6 hours of laboratory work each week. Students who have credi for Biology 10B do not receive credit for Zoology 1A but may for Zoology 1B. Prerequisite for Zoology 1B: Biology 10B or Zoology 1A.

Year course (4-4)

**8. Human Anatomy**

A study of human structure through the use of models, prepared dissections an microscope slides. Prerequisite: high school biology, Biology 10A, 1, or Zoology 1A Two hours of lecture and three hours of laboratory per week. Required of prenursin students. Credit reduced to 2 units if student has credit for Zoology 20.

Fall (3)

**20. Human Anatomy and Physiology**

An elementary course in human anatomy and physiology. Prerequisite: Hig school biology, or Biology 1 or 10A or Zoology 1A. Lectures three hours per week Credit reduced to 2 units if student has credit for Zoology 8 or Physiology 1A.

Fall and Spring (3)

### Upper Division Courses

**100. Embryology**

The development of vertebrates as illustrated by the frog, chick, and pig. Si hours of laboratory and two hours of lecture and quiz per week. Prerequisite: Zoolog 1B or Biology 10B.

Fall or Spring (4)

**101. General Physiology**

Fundamentals of plant and animal functions. Two lectures and two laborator periods per week. Prerequisites: Biology 10A-10B or Zoology 1A-1B, Chemistry 1A-1 or Chemistry 2A-2B.

Spring (4)

**104. Microtechnique**

Introduction to methods of preparation of tissues for microscopic study. Six hour of laboratory and one hour of lecture per week. Prerequisite: One year college chemistr and Zoology 1A-1B, Botany 2A-2B or Biology 10A-10B.

Fall or Spring (3)

### 6. Comparative Anatomy of the Vertebrates

Dissection, study and comparison of organ systems of typical vertebrates. Two urs per week of lecture and six hours of laboratory. Prerequisite: Zoology 1B or ology 10B.

Fall (4)

### 1. Parasitology

A study of animal parasites with special reference to those of man. Laboratory rk includes the identification of the important parasites of man and the collection d preservation of available local forms. Two hours of lecture and six hours of oratory per week. Prerequisite: Biology 10A-10B or Zoology 1A-1B.

Fall (4)

### 2. Marine Invertebrates

Identification and study of behavior and life histories of invertebrates of the San ego region. Frequent collecting trips to the beaches required. Prerequisite: Zoology or Biology 10B. Two hours of lecture and six hours of laboratory or field work r week.

Fall (4)

### 3A. Mammalogy

Lectures on classification, adaptations, and ecological relationships of mammals. boratory and frequent field trips to familiarize the student with the local mam- ls, taxonomic procedures and field techniques. One lecture and six hours of laboratory r week. Prerequisites: Zoology 1A or Biology 10B.

Spring (3)

### 3B. Ornithology

The study and identification of birds, especially those of the Pacific Coast and San Diego region. One hour of lecture and six hours per week of laboratory, or d excursions. Prerequisite: Zoology 1B or Biology 10B.

Spring (3)

### 4. Evolution

The development of theories of evolution. Two lectures per week.

Spring (2)

### 5. Cold-blooded Vertebrates

The classification, natural history and distribution of fishes, amphibians, and tiles with special reference to the local fauna. Practice in the techniques of collec- n and the use of keys for identification. Frequent field trips. One lecture and two oratory periods per week. Prerequisites: Zoology 1B or Biology 10B.

Spring (3)

### 1. General Entomology

The classification, life history, structure, and physiology of insects. Prereq- ite: Zoology 1A or Biology 10B. Two hours of lecture and three hours of laboratory week.

Fall (3)

### 2. Systematic Entomology

Classification of insects with especial emphasis on a group of insects of the dent's choice. To be taken with or to follow 121. May be repeated for credit but h a total of not more than 3 units. Three to six hours of laboratory work each ek.

Spring (1 or 2)

### 3. Economic Biology

Study of the uses of plants and animals to man and the ways in which they ure him and his possessions. Consideration is also given to general methods of trol and conservation. Prerequisite: Zoology 1A, Biology 1, or Biology 10B. Not n to students who have credit in Botany 123.

Fall (2)

### 124. Scientific Illustration

Drawing or photography of scientific subjects. Students are assigned individual projects, following their respective inclinations. It is desirable for students electing this course to have a definite project, or projects in mind and to confer with the instructor in advance in case specialized needs are required. Six hours of laboratory work per week. Not open to students who have credit in Botany 124.

Fall (2) (Not offered 1949-50)

### 125. Economic Entomology

A course designed primarily for students of agriculture, horticulture, and their specialized fields, but also of use and value to those majoring in the biological sciences Emphasis is placed on determination and control of insects affecting plants and their products. Quarantine measures are also studied. Two lectures and one laboratory period per week. Prerequisites: Zoology 1A or Biology 10B.

Spring (3)

### 126. Medical Entomology

The role of insects and other arthropods in transmission and causation of human diseases. Three hours of laboratory and two hours of lecture per week. Prerequisite: Zoology 1A or Biology 10B.

Fall (3)

### 130. Readings in Biology

Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles, ecology, economic zoology, zoogeography, breeding habits, animal behavior. Not open to students who have credit in Botany 130.

Spring (2)

### 131. Field Zoology

Designed to give a working knowledge of the more common animals in the Southern California fauna; field trips emphasizing both observational methods in the study of behavior and habitat relations, and collecting techniques; laboratory to include identification of species, preparation of animal for exhibition and study; lectures on taxonomy, adaptations and ecological relationships. Prerequisites: Course in biology in high school or college, or permission of the instructor.

Summer (4)

### 140. Histology

A study of the microscopic structures and differentiation of tissues and organs of the vertebrates, especially mammals. One lecture and 6 hours of laboratory per week Prerequisites: Zoology 1A-1B, or Biology 10A-10B; recommended Zoology 100.

Fall (3)

### 145. Hematology

Microscopic and chemical examination of blood. One lecture and two laboratory periods per week. Prerequisite: Chemistry 102.

Fall (3)

### 155. Genetics

An introductory course to the principles of heredity and cytogenetics, including the genetics of man, other animals, and plants. Designed primarily for science majors Two lectures per week. Not open to students who have taken Zoology 165. Prerequisite: Biology 10A-10B, Zoology 1A-1B, or Botany 2A-2B. Not open to students who have credit in Botany 155.

Spring (2)

### 165. Human Heredity

Presentation of selected principles of heredity as related primarily to human inheritance. Designed primarily for non-science majors. Two lectures per week. Not open to students who have taken Zoology 155, Genetics (formerly 114A).

Fall (2)

**199. Special Study**

Work other than is outlined in the above courses. Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least 15 units of Zoology with a grade of A or B.

Fall or Spring (1 or 2)

## Graduate Courses

**200. Seminar**

To be conducted by the various members of the staff, with adaptation to the needs of the class and its background. Especial emphasis will be placed on current concepts in the various fields of Biology including problems of migration, distribution, speciation, evolution. Required of all graduate students. Prerequisite: Graduate standing.

Fall (3)

**202. Hydrobiology**

A course in aquatic ecology with special emphasis on fresh water but with reference to marine biology. Prerequisite: Graduate standing.

(2)

**213. Advanced Studies in Ornithology**

Lectures and seminar on advanced problems of morphology, distribution, behavior and classification of birds. Prerequisite: Graduate standing.

(2)

# PROVISIONAL CURRICULUM

This curriculum is for the purpose of assisting provisional students in attainin regular status in a curriculum which leads to the A.B. Degree. Students in the provisional program are given close supervision in selection of courses and are place in classes specially designed to aid in adjustment to the college program.

Reclassification to regular status may be obtained upon the completion of a least 24 units of work of "C" grade with an over-all grade point average of 1.0, o upon recommendation of a reclassification committee. Reclassification must ordinaril take place within the first two years of college work.

The courses in the provisional curriculum are open only to students in provisional status. Provisional students in their first college year must select thre courses each semester from the list of subjects in the provisional curriculum. All othe courses selected to complete the student's program may be chosen from the regula schedule of courses or from additional courses in the provisional curriculum with th approval of the adviser.

## A SUGGESTED PROGRAM FOR PROVISIONAL STUDENTS

### First Year

| | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem* |
| * English 41, English Composition, and 42, Freshman Literature | 3 | 3 |
| Physical Science 40, Man and His Physical World, or equivalent (see lower division requirements.) | – | 3 |
| Biology 40, Man and His Biological World, or equivalent (see lower division requirements.) | 3 | – |
| Social Science 40, Contemporary Problems | 3 | – |
| Sociology 45, Marriage and the Family | – | 3 |
| Health Education 21, Principles of Healthful Living | – | 2 |
| Psychology 40, Psychology and Life | 3 | – |
| Physical Education (activity courses) | ½ | ½ |
| Elective | 3 | 4 |
| | 15½ | 15½ |

### Second Year

Student should consult with adviser concerning lower division preparation for the major and completion of lower division requirements.

| | | |
|---|---|---|
| Social Science Elective | 3 | – |
| Social Science 45, American Democracy | – | 3 |
| Elective | 12 | 12 |
| Physical Education (activity courses) | ½ | ½ |
| | 15½ | 15½ |

* Students who do not pass the English A qualifying examination must register in English 40, Pre-College English, which is a prerequisite for English 41. Credit in English 40 may be counted toward graduation as an elective but not to satisfy lower division English requirements.

## COURSES OF INSTRUCTION

### BIOLOGY

**40. Man and His Biological World**

A survey of the general field of biology with emphasis on the role of biological science in the welfare of man and his associates, consisting of three lectures and one demonstration period per week. This course may be counted as the equivalent of Biology 1.

Fall or Spring (3)

## ENGLISH

### 40. Pre-College English

The elements of composition, including drill in grammar and usage; exercises in ocabulary building and fundamental reading skills; theme writing. Credit in this ourse is equivalent to passing the English A qualifying examination and may be ounted toward graduation as an elective but not to satisfy lower division English equirements.

Fall or Spring (2)

### 41. English Composition

Composition stressing exposition. Reading from essays and articles. Prerequisites: Passing mark in the English A qualifying examination or credit in English 40. English 41 may be counted as the equivalent of English 1.

Fall or Spring (3)

### 42. Freshman Literature

Literature, mainly contemporary, is read for its thoughts and ideas, especially n relation to human problems and their solution. Practice in writing is continued. Required of all provisional students. Prerequisite: English 41. The course in English 42 may be counted as the equivalent of English 2.

Fall or Spring (3)

## PHYSICAL SCIENCE

### 40. Man and His Physical World

A brief survey of the nature of the scientific method and of selected topics in hysical science. Materials will be chosen from physics, chemistry, astronomy, and eology in order to give some background for an understanding of the relations of hysical science to modern life. Not open to students who have had a year course in igh school chemistry, physics, geology, or astronomy or a college course in any of hese subjects. This course may be counted as the equivalent of Physical Science 1A.

Fall or Spring (3)

## PSYCHOLOGY

### 0. Psychology and Life

An elementary survey of normal adult psychology, focused upon psychological rinciples in relation to life situations. Open only to students enrolled in the Proisional curriculum. This course may be counted as the equivalent of Psychology 1.

Fall or Spring (3)

## SOCIAL SCIENCE

### 0. Contemporary Problems

A survey of the major political, social, and economic forces in modern American fe. Chief problems are analyzed in relation to their setting, and students are given ound methods of approach in dealing with them. This course may be counted as the quivalent of Sociology 50A.

Fall or Spring (3)

### 5. American Democracy

The structure and function of government, as it relates to individual Americans. pecial emphasis on popular participation through voting, political parties, pressure roups, and public opinion. Prerequisite: Sophomore standing.

Spring (3)

## SOCIOLOGY

### 5. Marriage and the Family

The purpose of this course is to prepare young people for successful marriage and mily life. The development of personality through family relationships, the selection f a life partner, and the social, psychological, and economic factors involved in the stablishment of a home, are given special emphasis.

Fall or Spring (3)

# DIRECTORY

## (1948-49)

HEPNER, WALTER R.----------President

A.B., 1913, M.A., 1916, Ed.D., 1937, University of Southern California. Appointed 1935.

ACKLEY, JOHN WILLIAM----------Assistant Professor of Speech Arts

A.B., 1930, University of Redlands; A.M., 1933, and two years of graduate study at the University of Southern California. Appointed 1947.

ADAMS, JOHN R.----------Professor of English

A.B., 1920, A.M., 1922, University of Michigan; Ph.D., 1940, University of Southern California. Appointed 1928.

ALCORN, MARVIN DOUGLAS----------Associate Professor of Education

A.B., 1925, Southwestern College; A.M., 1931, Teachers College, Columbia University; Ed.D., 1942, University of Southern California. Appointed 1941.

ALLISON, JOHN DONALD----------Assistant Professor of Commerce

B.S.C., 1932, Temple University; M.B.A., 1935, Harvard University; one year graduate study at New York University. Appointed 1947.

AMSDEN, GEORGIA C.----------Associate Professor of Commerce

Diploma, Gregg College, Chicago; special secretarial training in various colleges; Traveling Representative and Secretary for the Federal Board for Vocational Education, France, World War I; in charge of Stenographic Division, Department of Personnel, American Red Cross Headquarters, Paris, France, World War I; Secretary, Standard Life and Accident Insurance Company, Detroit. Appointed 1925.

APPLE, JOE ALTON----------Associate Professor of Education

A.B., 1928, Southeastern State College; M.A., 1929, University of Oklahoma; Ed.D., 1941, Teachers College, Columbia University. Appointed 1947.

BACON, GUINIVERE KOTTER (Mrs. George)----------Associate Professor of Education

B.S., Utah Agricultural College; M.A., Stanford University. One year graduate study since 1926 at Stanford University, Teachers College of Columbia University, University of Southern California, and University of California at Los Angeles. Appointed 1928.

BAIRD, OSCAR----------Professor of Physics

B.A., 1910, University of Wisconsin; M.A., 1924, University of California. Three years graduate study since 1924 at University of Minnesota, University of California, University of Southern California, University of Oregon. Appointed 1921.

BAKER, CLIFFORD H., JR.----------Instructor in Spanish

B.A., 1933, San Diego State College; M.A., 1935, University of California. Two years graduate study since 1935 at University of California. Appointed 1937.

BALL, HANNAH WHEELER----------Instructor in English

B.A., Macalester College; M.A., Wellesley College; one year graduate study at University of California. Appointed 1947.

BARNHART, KENNETH EDWIN----------Professor of Sociology

A.B., 1915, Southwestern University; A.M., 1920, Southern Methodist University; Ph.D., 1924, University of Chicago. Appointed 1939.

BAUM, DONALD ELWOOD----------Assistant Professor of Music

B.Music, A.B., 1935, Upper Iowa University; M.A., 1946, University of Iowa. Appointed 1947.

BENSON, RICHARD M.----------Instructor in Sociology

B.S., 1923, Oregon State College; M.A., 1925, University of Washington; Ed.D., 1931, Stanford University. Appointed 1946.

BENTON, CARL WEBBER----------Acting Instructor in Physical Education

B.S., 1948, University of California at Los Angeles. Appointed 1948.

BLOCK, EDWARD A.----------Assistant Professor of English

A.B., 1938, M.A., 1939, Ph.D., 1943, University of California. Appointed 1946.

BROOKS, BAYLOR----------Assistant Professor of Geology

B.A., 1928, Stanford University. Two years graduate study since 1928 at University of Arizona and Stanford University. Appointed 1931.

BROWN, ELIZABETH McPIKE (Mrs. L. P.)---------------Professor of French

Ph.B., M.A., Ph.D., University of Chicago; one year graduate study at the Sorbonne, Paris, France; Certificat d'Etudes Françaises; Diplôme de l'Association Générale de Phonétique, Paris, France; Officier d' Académie. Appointed 1926.

BROWN, EUGENE P.---------------------------Assistant Professor of Commerce

B.S., 1926, Southeastern Teachers College; B.A., 1927, M.A., 1928, University of Oklahoma. One year graduate study at University of Chicago, University of Southern California and University of Mexico. Appointed 1947.

BROWN, LESLIE PARKER--------------------Professor of Spanish and French

B.A., 1912, Yale College; M.A., 1913, Harvard University; Ph.D., 1935, University of Southern California. Appointed 1922.

BRUNER, WILLIAM S.---------------------------Assistant Professor of English

B.S., 1925, University of Virginia; M.A., 1940, Claremont College. Appointed 1948.

BRYDEGAARD, MARGUERITE ANNA-------Associate Professor of Education

A.B., San Diego State College; M.A., Claremont Colleges. Appointed 1936.

BURNETT, GAIL ALLEN--------------------------Assistant Professor of English

A.B., Randolph-Macon Woman's College; M.A., University of California at Los Angeles; Ph.D., University of Southern California. Appointed 1947.

BUSH, KENT--------------------------------------Acting Instructor in English

A.B., 1941, San Diego State College; one year graduate work, University of California at Los Angeles. Appointed 1947.

CAMERON, ROY ERNEST------------------------------Professor of Economics

A.B., 1922, Ph.D., 1929, University of California. Appointed 1929.

CAMPBELL, LOIS BERYL---------------------Assistant Professor of Education

A.B., University of California; M.A., Teachers College, Columbia University. Appointed 1947.

CARLSON, HILDING B.-----------------------Associate Professor of Psychology

Ph.B., 1930, M.S., 1932, Ph.D., 1937, University of Chicago. Appointed 1948.

CARLSON, THORSTEN ROBERT------Principal of Campus Laboratory School;
Associate Professor of Education

B.E., 1939, St. Cloud State Teachers College; M.A., 1942, Ph.D., 1946, University of Minnesota. Appointed 1948.

CAVE, MARY F.-----------------------Assistant Professor of Physical Education

B.S., University of North Dakota; one-half year's study at Bennington College. Appointed 1946.

CHOPLIN, ROSA MARIA (Mrs. Ralph)------------Acting Instructor in Spanish

A.B., University of California at Los Angeles; one year graduate study at University of Southern California. Appointed 1948.

COLTON, THEODORE S.-----------------------------------Instructor in English

B.A., 1939, M.A., 1940, and two years' graduate study, University of California at Los Angeles. Appointed 1946.

CORBETT, KATHERINE E.------------------Associate Professor of Education

B.Pd., Michigan State College; B.S., M.A., Teachers College, Columbia University. Appointed 1921.

CORCORAN, EUGENE F.---------------------Acting Instructor in Mathematics

B.S., 1940, North Dakota State College. Appointed 1946.

CORRIGAN, ROBERT FORD-----------------Assistant Professor of Speech Arts

A.B., 1939, University of Michigan; M.A., 1941, University of Iowa. Appointed 1947.

CROUCH, JAMES ENSIGN-------------------------------Professor of Biology

B.S., 1930, M.S., 1931, Cornell University; Ph.D., 1939, University of Southern California. Appointed 1932.

CUNNINGHAM, CORNELIUS CARMAN------Associate Professor of Speech Arts

A.B., 1915, Beloit College; M.A., 1923, Northwestern University; Ph.D., 1935, University of Iowa. Appointed 1947.

DEHNEL, PAUL A.------Acting Instructor in Biology

B.A., 1943, San Diego State College; M.A., 1948, University of California. Appointed 1948.

DEPUTY, ERBY CHESTER------Professor of Education

B.A., 1922, University of Denver; M.A., 1926, Ph.D., 1929, Columbia University. Appointed 1931.

DICKHAUT, FLORENCE LILLIAN SMITH (Mrs. Charles A.)
Professor of English

B.A., Northwestern University; M.A., University of Chicago. Appointed 1917.

EAGLE, JOHN E.------Assistant Professor of Mathematics

B.S., 1930, Montana State College; A.M., 1940, Ed.D., 1947, Stanford University. Appointed 1946.

EARNEST, SUE W. (Mrs. L. E.)------Assistant Professor of Speech Arts

B.A., San Diego State College; M.A., Ph.D., University of Southern California. Appointed 1947.

ENGLANDER, HERMAN S.------Acting Instructor in Mathematics

B.S., 1939, California Institute of Technology. Appointed 1947.

ESTEP, LEWIS I.------Acting Instructor in Geology

A.B., 1940, San Diego State College. Appointed 1946.

EVANS, ROSS A.------Assistant Professor of Chemistry

A.B., 1937, San Diego State College; M.A., 1939, University of California at Los Angeles; one year of graduate study at the University of Southern California. Appointed 1946. Resigned Feb. 1949.

FELTON, JOHN R.------Assistant Professor of Economics

B.A., 1939, M.A., 1941, and one and one-half years of graduate study at the University of California. Appointed 1948.

GELDREICH, EDWARD W.------Assistant Professor of Psychology

B.A., 1933, M.A., 1935, University of Cincinnati; three years graduate study at the University of Chicago. Appointed 1947.

GENTRY, ADRIAN N.------Instructor in Biology

Sc.B., 1934, Ottawa University; M.A., 1935, University of Kansas. Three years of graduate study at University of Washington and University of California. Appointed 1946.

GIBSON, ERNEST DANA------Associate Professor of Commerce

B.S., 1936, University of Minnesota; M.A., 1939, Colorado State College of Education; Ed.D., 1944, New York University. Appointed 1947.

GJERDE, CLAYTON M.------Assistant Professor of Education

B.A., 1935, Augsburg College; M.A., 1944, and two years of graduate study at the University of Minnesota. Appointed 1948.

GLEASON, JOHN MORTIMER------Assistant Professor of Mathematics

B.A., 1929, University of California at Los Angeles; M.A., 1930, University of California. One and a half years graduate study since 1930 at University of Southern California, University of California at Los Angeles and Claremont Colleges. Appointed 1930.

GRAHAM, JOHN LLOYD------Acting Instructor in Mathematics

B.S., 1934, Ashland College; M.A., 1940, Kent State University. Appointed 1947.

GRESS, IRVIN S.------Director of Occupational Guidance and Placement;
Assistant Professor of Psychology

A.B., 1922, George Washington University; M.Ed., 1938, University of Pittsburgh. Two years graduate study at Columbia University, Pennsylvania State College and University of Pittsburgh. Appointed 1946.

GULICK, SIDNEY L., JR.------Associate Professor of English

A.B., 1923, A.M., 1925, Oberlin College; Ph.D., 1931, Yale University. Appointed 1945.

HALE, PHILIP------------------------Acting Associate Professor of Engineering
S.B.C.E., 1923, Carnegie Institute of Technology; two years of graduate study at Carnegie Institute of Technology and University of California. Appointed 1948.

HAMMACK, EDITH CHASTAIN---------------**Associate Professor of Education**
B.A., San Jose State College. Appointed 1911.

HAMMACK, ISABELLA STEWART-----------Associate Professor of Education
B.A., M.A., University of California. One-half year graduate study since 1929 at University of California. Appointed 1936.

HARCLEROAD, FRED F., JR.--------------**Director of Audio-Visual Education; Assistant Professor of Education**
A.B., 1939, M.A., 1942, Colorado State College of Education; Ph.D., 1947, Stanford University. Appointed 1946.

HARRINGTON, NEIL J.------------------------Acting Instructor in Chemistry
B.S., 1939, Monmouth College; one year of graduate study at DePaul University and Northwestern University. Appointed 1948.

HARVEY, DOROTHY R. (Mrs. F. A.)-------------**Assistant Professor in Botany**
B.A., San Diego State College; M.A., University of Southern California. One year graduate study since 1928 at University of Southern California and University of Chicago. Appointed 1924.

HARWOOD, ROBERT DANIEL--------------------------**Professor of Zoology**
A.B., 1920, Pomona College; Ph.D., 1928, Cornell University. Appointed 1928.

HASKELL, HARRIET---------------------------Assistant Professor of English
A.B., Mills; A.M., Bryn Mawr; Ph.D., University of Wisconsin. At San Diego State College since 1940, excepting 1943-1945.

HELLYER, C. DAVID-------------------------Assistant Professor of Journalism
B.A., 1936, The Principia; M.S., 1938, Columbia University. Appointed 1947.

HISCOX, ETHEL M.-------------------------------**Assistant Professor of Music**
Graduate of Oberlin College Conservatory; B.S., Columbia University; M.A., New York University. Voice study with Lila Robeson and Herbert Witherspoon of New York Metropolitan Opera Co. Appointed 1947.

HOUSEMAN, RICHARD A.--------------------Associate Professor of Education
B.S., 1936, Central Michigan College of Education; M.A., 1945, Ed.D., 1946, Teachers College, Columbia University. Appointed 1948.

HOUSER, LOWELL D.--------------------------------**Assistant Professor of Art**
Diploma, 1924, Chicago Art Institute. Five years' special study since 1924 in Mexico, Yucatan, Haiti, and New York City. Appointed 1938.

HUNTER, JAMES J., JR.---------------------**Director of Secondary Education;** Professor of Education
A.B., 1932, Cornell University; M.S., 1936, Ph.D., 1940, Syracuse University. Appointed 1946.

SENSEE, ROBERT W.------------------------Assistant Professor of Chemistry
B.A., 1941, Reed College; M.A., 1943, Ph.D., 1947, Oregon State College. Appointed 1948.

ACKSON, EVERETT GEE----------------------------------**Professor of Art**
B.A., 1930, San Diego State College. Three years special study in Mexico. M.A., 1939, University of Southern California. Appointed 1930.

OHNSON, FRANK LOUIS----------------------**Associate Professor of English**
B.A., 1928, M.A., 1929, University of Minnesota; Ph.D., 1934, University of Wisconsin. Appointed 1939.

ONES, KENNETH K., JR.---------------------------Instructor in Speech Arts
B.S., 1942, Northwestern University; M.A., 1948, Stanford University. Appointed 1948.

OSEPH, LIONEL------------------------------**Assistant Professor of Chemistry**
B.S., 1933, St. Louis University; M.S., 1934, Ph.D., 1937, Washington University. Appointed 1947.

KALBFELL, DAVID C.-------------------------Assistant Professor of Physics

A.B., 1934, University of California at Los Angeles; M.A., 1936, Ph.D., 1939, University of California. Appointed 1948.

KAPLAN, OSCAR J.---------------------------Assistant Professor of Psychology

A.B., 1937, M.A., 1938, University of California at Los Angeles; Ph.D., 1940, University of California. Appointed 1946.

KASCH, FREDERICK W.--------------Assistant Professor of Physical Education

B.S., 1935, M.S., 1937, University of Illinois; one-half year of graduate study at New York University. Appointed 1948.

KEENEY, JOSEPH SUMNER-----------------------------Professor of English

B.A., 1921, Yale College; M.A., 1928, Ph.D., 1933, University of California. Appointed 1933.

KENNEDY, CHESTER BARRETT---------------Assistant Professor of English

B.A., 1927, Chico State College; M.A., 1939, Stanford University. Three years graduate study since 1928 at Stanford University and the University of California. Appointed 1937.

KITZINGER, ANGELA M.--------------Assistant Professor of Health Education

A.B., Barnard College; M.A., Teachers College, Columbia University. Year of additional work at Central School of Hygiene and Physical Education and at Folk High School, Ollerup, Denmark. Appointed 1945.

KLAPP, ORRIN E.-----------------------------Assistant Professor of Sociology

M.A., 1940, Ph.D., 1947, University of Chicago. Appointed 1948.

KUWARTH, MADGE E.--------------------------------Instructor in Education

A.B., University of Washington; A.M., Teachers College, Columbia University. Appointed 1947.

LAMDEN, CHARLES W.----------------------Associate Professor of Commerce

A.B., 1937, M.A., 1939, University of California at Los Angeles; Ph.D., 1948, University of California. Appointed 1946.

LAURITSEN, WILLIAM H.----------------------Professor of Health Education

A.B., 1923, M.A., 1929, University of Nebraska; Ph.D., 1939, Ohio State University. Appointed 1947.

LEIB, JULIUS------------------------------------Associate Professor of Music

Three years special study at Leipzig Conservatory. Appointed 1938.

LEIFFER, DONALD B.----------------------------Professor of Political Science

A.B., 1930, University of California at Los Angeles; M.A., 1932, Ph.D., 1939, Harvard University. Appointed 1948.

LEMME, MAURICE M.--------------------Associate Professor of Mathematics

A.B., 1926, Oakland City College, Indiana; A.M., 1928, Indiana University; Ph.D., 1947, Purdue University. Appointed 1948.

LEONARD, CHARLES B.--------------------------------Professor of History

B.A., 1921, M.A., 1922, Ph.D., 1929, University of California. Appointed 1921.

LESLEY, LEWIS B.----------------------------------------Professor of History

B.A., 1920, Stanford University; M.A., 1923, Ph.D., 1933, University of California. Appointed 1924.

LINLEY, JAMES------------------------------Assistant Professor of Education

Ph.B., 1927, University of Chicago; M.S., 1934, Ph.D., 1938, University of Southern California. Appointed 1945.

LIVINGSTON, GEORGE ROBERT--------------------Professor of Mathematics

B.S., 1910, M.A., 1922, University of California. One year graduate study since 1922 at University of California, University of California at Los Angeles, and University of Southern California. Appointed 1921.

LOCKMAN, EVELYN----------------Assistant Professor of Physical Education

B.A., Vanderbilt University; M.A., George Peabody College; one year of graduate study at the University of Wisconsin and New York University. Appointed 1948.

LORBER, NANCY CHASTAIN (Mrs. J.)............Acting Instructor in English

B.A., San Diego State College; one year graduate study at University of California. Appointed 1947.

LUCIO, WILLIAM HOWARD................Director of Elementary Education; Associate Professor of Education

A.B., 1934, M.A., 1937, Ph.D., 1944, University of California. Appointed 1939.

MACQUARRIE, WILLIAM D..............Assistant Professor of Industrial Arts

B.A., 1935, San Jose State College; M.A., 1938, Stanford University. One and one-half years of graduate study at the University of Southern California. Appointed 1947.

MADDEN, RICHARD................Dean of Education; Professor of Education

B.A., 1926, Nebraska (Peru) State Teachers College; M.A., 1930, Ph.D., 1931, Columbia University. Appointed 1939.

MARCHAND, ERNEST L.........................Associate Professor of English

B.A., and M.A., 1926, University of Washington; Ph.D., 1938, University of Wisconsin. Appointed 1946.

McBLAIR, WILLIAM............................Acting Instructor in Biology

B.A., 1947, San Diego State College; one-half year of graduate work at the University of California. Appointed 1948.

McCLINTIC, JOSEPH O.......................Associate Professor of Economics

A.B., 1924, Central College; A.M., 1927, University of Missouri; Ph.D., 1940, University of Wisconsin. Appointed 1946.

McCOLLOM, IVAN N..............................Director of Summer Sessions; Associate Professor of Psychology

B.A., 1930, Central Washington College of Education; B.S., 1931, M.S., 1932, University of Oregon; Ed.D., 1940, Colorado State College of Education. Appointed 1946.

McGAUGHEY, JANET M. (Mrs. J. R.).............Assistant Professor of Music

B.M., M.M., University of Michigan. Appointed 1947.

MENDENHALL, MARY..............Dean of Women; Professor of Philosophy

B.A., University of Colorado; M.A., University of Southern California; Ph.D., Yale University. Appointed 1939.

MERRILL, JOHN E...............................Assistant Professor of History

A.B., 1933, Stanford University; A.M., 1934, Harvard University. Two years graduate study at Stanford University. Appointed 1946.

MERZBACHER, CLAUDE FELL.......................Instructor in Chemistry

B.S., 1939, University of Pennsylvania. Appointed 1947.

MESSIER, LEONARD N.........................Assistant Professor of French

A.B., 1935, San Diego State College; M.A., 1936, Ph.D., 1946, University of California. Appointed 1946.

MILLER, DOROTHY A..........................Acting Instructor in Chemistry

B.S., A.B., Southeast Missouri State Teachers College; M.S., State University of Iowa. Appointed 1947.

MILNE, DAVID S..............................Assistant Professor of Sociology

A.B., 1932, University of California at Los Angeles; M.A., 1939, University of Southern California; Ph.D., 1948, University of Chicago. Appointed 1946.

MOE, CHESNEY R.........................................Professor of Physics

B.A., 1929, M.A., 1931, Stanford University; Ph.D., 1941, University of Southern California. Appointed 1931.

MOORE, EDWENA B. (Mrs. E. J.).....................Instructor in Education

B.A., San Diego State College. Appointed 1947.

MORITZ, CHARLES E...........................Assistant Professor of Biology

A.B., 1932, Dartmouth College; Ph.D., 1936, University of California. Appointed 1946.

MYERS, MABEL A. ---------- Assistant Professor of Biology

B.A., M.A., Pomona College; Ph.D., Cornell University. Post doctoral study at University of Southern California, University of California at Los Angeles, University of Wisconsin and Claremont Colleges. Appointed 1946.

NASATIR, ABRAHAM PHINEAS ---------- Professor of History

B.A., 1921, M.A., 1922, Ph.D., 1926, University of California. Appointed 1928.

NICHOLS, AMBROSE R., JR. ---------- Associate Professor of Chemistry

B.S., 1935, University of California; Ph.D., 1939, University of Wisconsin. Appointed 1939.

NORLAND, CALVERT E. ---------- Instructor in Biology

B.A., 1931, Pomona College; M.S., 1933, University of California. One and one-half years graduate study at University of California; one and one-half years graduate study at Claremont Colleges. Appointed 1947.

OLSON, ANDREW C., JR. ---------- Instructor in Biology

B.A., 1939, San Diego State College; M.S., 1942, University of Idaho. One year graduate study at University of California. Appointed 1946.

OPPENHEIMER, MAX, JR. ---------- Instructor in Foreign Languages

B.ès L, 1935, University of Paris; B.A., 1941, New York University; M.A., 1942, University of California at Los Angeles; Ph.D., 1947, University of Southern California. Appointed 1947.

OSBORN, CLARENCE G. ---------- Professor of History and Political Science

B.A., 1926, M.A., 1927, Ph.D., 1935, Stanford University. At San Diego State College 1928-1929, and since 1937.

PATTERSON, LENA E. ---------- Professor of Art

A.B., B.S., Ohio University; M.A., Columbia University. One year graduate study since 1918 in Berlin, Vienna, Paris, London. At San Diego State College since 1933. Deceased January 10, 1949.

PEASE, GLENN R. ---------- Acting Assistant Professor of Psychology

A.B., 1915, Albion College; M.A., 1927, Ph.D., 1928, State University of Iowa. Appointed 1947.

PEIFFER, HERBERT C., JR. ---------- Dean of Students;
Professor of Psychology and Guidance

A.B., 1928, University of California at Los Angeles; M.A., 1930, Ph.D., 1939, Stanford University. Appointed 1937.

PERRY, FAY V. (Mrs. J. M.) ---------- Director of Guidance for Provisional Students;
Associate Professor of Sociology

B.A., San Diego State College; M.A., Ed.D., University of Southern California. Appointed 1936.

PETERSON, CHARLES E. ---------- Dean of Men; Professor of Physical Education

A.B., 1928, San Diego State College; M.A., 1937, Claremont Colleges. Appointed 1921.

PFAFF, PAUL LEWIS ---------- Associate Professor of Speech Arts

B.A., 1929, Stanford University; M.A., 1937, University of Southern California. Two years study since 1937 at University of Southern California. Appointed 1931.

PHILLIPS, GEORGE L. ---------- Assistant Professor of English

B.A., 1931, Dartmouth College; M.A., 1932, Harvard University; Ph.D., 1937, Boston University. Appointed 1947.

PHILLIPS, WALTER THOMAS ---------- Professor of Spanish

A.B., 1925, University of Washington; M.A., 1926, Stanford University; Ph.D., 1943, University of Southern California. Graduate study at National University of Mexico, Institute of French Education, Middlebury College Italian School. Appointed 1927.

POST, LAUREN CHESTER ---------- Professor of Geography

A.B., 1924, M.A., 1931, Ph.D., 1937, University of California. Appointed 1937.

POVENMIRE, E. KINGSLEY ---------- Assistant Professor of Speech Arts

B.S., 1929, Ohio State University; M.F.A., 1933, Yale University. Appointed 1946.

**RESTON, DUDLEY A.**------------------------Assistant Professor of Biology

B.S., 1933, Washington State College; M.S., 1940, Ph.D., 1947, University of Minnesota. Appointed 1948.

**RUGH, EARL E.**--------------------**Acting Assistant Professor of Mathematics**

B.S., 1899, Ohio Wesleyan University; M.A., 1923, Columbia University. Appointed 1946.

**AGEN, KATHERINE M.**----------------------**Assistant Professor of History**

B.A., Penn College; M.A., Bryn Mawr College; Ph.D., University of Wisconsin. Appointed 1947.

ENSHAW, MORTON J.----------------Coordinator, Personnel Services Center;
Assistant Professor of Psychology

A.B., 1938, M.A., 1940, Colorado State College of Education; Ph.D., 1945, Stanford University. Appointed 1948.

ICHARDSON, M. BRUCE--------------------------Lecturer in Engineering

A.B., 1927, Aeronautical Engineer, 1928, Stanford University. Appointed 1948.

ICHARDSON, ROBERT W.------------------------Professor of Geography

A.B., 1930, Ph.D., 1943, University of California. At San Diego State College 1939-1942 and since 1948.

**IDOUT, LIONEL U.**-----------------------------------**Instructor in History**

A.B., 1937, San Diego State College; M.A., 1940, and one and one-half years graduate study at University of California. Appointed 1946.

**OBINSON, DUDLEY HUGH**-------------------------**Professor of Chemistry**

B.A., 1927, Louisiana State University; M.S., 1932, University of Iowa; Ph.D., 1942, University of Southern California. Appointed 1928.

**OBINSON, EVELYN L.**----------------------**Instructor in Physical Education**

B.S., Mary Washington College of the University of Virginia; M.S., University of Southern California. Appointed 1946.

**OGERS, SPENCER LEE**-------------------------**Professor of Anthropology**

B.A., 1927, San Diego State College; M.A., 1930, Claremont Colleges; Ph.D., 1937, University of Southern California. Appointed 1930.

OHFLEISCH, KRAMER J.---------------------Associate Professor of History

A.B., 1933, M.A., 1935, Ph.D., 1946, University of California. Appointed 1947.

OSS, MELVYN K.--------------------------Assistant Professor of Chemistry

A.B., 1939, San Diego State College; M.S., 1942, and two years graduate study at University of Southern California. Appointed 1939.

OWE, ROBERT D.--------------------------Associate Professor of Chemistry

A.B., 1931, Engineer in Engineering Chemistry, 1932, Ph.D., 1939, Stanford University. Appointed 1946.

UJA, HARRY---------------Assistant Professor of Philosophy and Psychology

A.B., 1933. University of California at Los Angeles; M.A., 1934, University of Chicago; Ph.D., 1936, Princeton University; one year post doctoral study at University of California at Los Angeles. Appointed 1947.

UOCCO, ILSE H. (Mrs. L.)------------------------Associate Professor of Art

B.E., University of California at Los Angeles; M.A., Columbia University. Appointed 1934.

AN, FREDERICK L.----------------------Associate Professor of Economics

B.S., 1916, Tufts College; Ph.D., 1930, University of California. Appointed 1946.

HEY, OLE------------------------Acting Assistant Professor of Mathematics

B.S., 1924, M.A., 1932, and one year of graduate study at the University of Minnesota. Appointed 1947.

HMOCK, JOYCE C. (Mrs. D.)----------------------Instructor in Education

A.B., San Diego State College. Appointed 1947.

HOELLER, WILBUR C.-------------------------Instructor in Engineering

B.S.C.E., 1945, M.S.C.E., 1948, University of Texas. Appointed 1948.

SCHRUPP, MANFRED H.--------------------Assistant Professor of Education

B.S., 1935, M.Ed., 1941, and one and one-half years of graduate study at the University of Minnesota. Appointed 1948.

SCHUNERT, JIM R.----------------------------Assistant Professor of Education

B.S., 1934, M.A., 1941, and one year of graduate study at the University of Minnesota. Appointed 1948.

SCHUTTE, WILLIAM H.--------------Assistant Professor of Physical Education

B.S., 1933, University of Idaho, M.S., 1947, University of Southern California. Appointed 1947.

SCHWARTZ, EVA H. (Mrs. H.)-----------------Acting Instructor in Chemistry

B.S., M.S., and one and one-half years graduate study at University of California. Appointed 1946.

SCHWOB, MARION LYON (Mrs. W. E.)-Associate Professor of Physical Education

B.A., University of Iowa; M.S., University of Southern California. Appointed 1934.

SCOTT, FRANK L.---------------------Assistant Professor of Physical Education

A.B., 1931, Grinnell College; M.A., 1940, University of Michigan. Appointed 1947.

SELLMAN, HUNTON D.--------------------------------Professor of Speech Arts

B.S., 1922, Purdue University; M.S., 1925, University of Arizona. Three and one-half years graduate study at University of California, University of North Carolina and Yale University. Appointed 1946.

SHANNON, FLORENCE S. (Mrs. E. L.)------------------Assistant Professor o
Physical Education

B.A., University of California; M.S., University of Southern California Appointed 1933.

SHIELDS, ALLAN E.-------------------------Assistant Professor of Philosoph

A.B., 1941, University of California; M.A., 1947, and one year additiona graduate study at University of Southern California. Appointed February, 1949

SHIELDS, KARENA P.--------------------Acting Assistant Professor of Englis

A.B. and one year of graduate study at the University of Southern California Appointed 1948.

SHOUSE, CLAUDE F.-------------------------------------Instructor in Englis

A.B., 1928, Georgetown College; M.A., 1941, University of Kentucky; one an one-half year graduate study at University of Pittsburgh and University o Southern California. Appointed 1946.

SILVERNAIL, CHESTER J.---------------------------Instructor in Astronom

A.B., 1948, San Diego State College. Appointed 1948.

SION, ESTHER B. (Mrs. Peter)------------------------Acting Instructor in Ar

B.F.A. and M.F.A., University of Southern California. Appointed February 1949.

SMITH, CHARLES ROBERTS---------Assistant Professor of Physical Educatio

B.A., 1931, San Diego State College; M.S., 1949, University of Southern California. Appointed 1933.

SMITH, CLIFFORD EDWARD--------------------------Professor of Astronom

B.A., 1923, Carleton College; M.A., 1926, Swarthmore College; Ph.D., 1936 University of California. Appointed 1937.

SMITH, DEANE FRANKLIN---------------------Associate Professor of Musi

B.Mus., 1931, M.Mus., 1939, Northwestern University. Appointed 1939.

SMITH, LOUIS E., JR.----------------------------Assistant Professor of Physic

A.B., 1938, San Diego State College; Ph.D., 1945, University of Washington Appointed 1946.

SORENSON, GEORGE N.-----------------------------Assistant Professor of Ar

A.B., 1937, San Diego State College; M.A., 1946, University of Southern California. Appointed 1946.

SPANGLER, JOHN A.------Assistant Professor of Chemistry

A.B., 1939, Ph.D., 1942, West Virginia University. Appointed 1946.

SPORTSMAN, CHARLES C.------Assistant Professor of Physical Education

B.S., 1927, North Texas State Teachers College; M.S., 1947, University of Southern California. Appointed 1947.

SPRINGSTON, CHRISTINE------Associate Professor of Music

B.A., B.M., University of Redlands; M.A., University of Washington. Diplomée d'execution, Conservatoire Americain, Fontainebleau, France. Appointed 1930.

STEINMETZ, HARRY CHARLES------Associate Professor of Psychology

B.A., 1924, M.A., 1927, University of California; Ph.D., 1947, Purdue University. Appointed 1930.

STONE, HAMILTON L.------Acting Assistant Professor of Engineering

B.S., 1925, U. S. Naval Academy. Two and one-half years graduate study. Appointed 1947.

STONE, JOHN PAUL------Head Librarian; Professor of Library Science

B.S., 1926, Northwest Missouri State Teachers College; B.S., 1929, M.S., 1930, University of Illinois; Ph.D., 1945, University of Chicago. Appointed 1930.

STORM, ALVENA (Mrs. Eugene)------Associate Professor of Geography

A.B., A.M., University of California. Extensive travel and study in Europe, Panama and United States. Appointed 1926.

STRAUB, LURA LYNN------Assistant Professor of Commerce

B.A., Jamestown College; M.C.S., Indiana University. Appointed 1948.

SWIGGETT, JEAN D.------Assistant Professor of Art

A.B., 1934, San Diego State College; M.F.A., 1939, University of Southern California. Appointed 1946.

TALBOY, RUTH A.------Assistant Professor of Home Arts

B.S., Iowa State College; M.A., Stanford University. Appointed 1947.

TAYLOR, MERREL A.------Instructor in Biology

A.B., 1936, Indiana University; B.S.F., 1938, M.A., 1940, University of Michigan. Appointed 1946.

TERHUNE, JOHN A.------Lecturer in Physics

B.S., 1916, U. S. Naval Academy; M.S., 1929, Engineering School, Harvard University. Appointed 1946.

TERRY, WILLIAM L.------Lecturer in Physical Education

A.B., 1930, Western Kentucky State College; M.S., 1932, Indiana University; two years of additional study at University of Kentucky and University of Illinois. Appointed 1946.

THEOBALD, JOHN R.------Associate Professor of English

B.A., 1925, St. Catherine's College, Oxford University; M.A., 1928, Mansfield College, Oxford University; Ph.D., 1942, University of Iowa. Appointed 1946.

TIDWELL, JAMES N.------Associate Professor of English

B.A., 1929, Simmons University; M.A., 1933, University of Oklahoma; Ph.D., 1947, Ohio State University. Appointed 1947.

TOLLEFSEN, DOROTHY J.------Instructor in Physical Education

A.B., M.A., University of California. Appointed 1946.

TORBERT, FRANCES B. (Mrs. H.)------Assistant Professor of Commerce

A.B., Stanford University; M.A., University of Southern California. One year graduate work at Stanford University. At San Diego State College since 1937 excepting 1943-1946.

TRAIL, MABEL COY------Associate Professor of English

B.A., Parsons College; M.A., State University of Iowa; Ph.D., University of Southern California. Appointed 1935.

TUCKER, GORDON H.------Associate Professor of Biology

B.S., 1931, M.S., 1934, University of South Carolina; Ph.D., 1934, University of North Carolina. Appointed 1945.

WALKER, HILDE KRAMER (Mrs.)--------------Assistant Professor of German

B.A., M.A., Northwestern University. Appointed 1931.

WALLING, CURTIS R.--------------Associate Professor of Engineering

B.A., 1925, E.E., 1926, Stanford University. One and one-half years of graduate study since 1926 at Stanford University and the University of Southern California. Appointed 1931.

WARREN, TULLY E.--------------Acting Instructor in Political Science

B.A., 1938, M.A., 1939, and two years of graduate study at Stanford University. Appointed 1947.

WATENPAUGH, FRANK M.--------------Associate Professor of Commerce

A.B., 1916, Pomona College; M.A., 1931, University of Southern California. Two years graduate study since 1931 at University of Southern California and University of Oregon. Appointed 1935.

WATSON, DONALD R.--------------Dean of Arts and Sciences
Professor of Physical Science

B.A., 1924, B.S., 1925, M.A., 1927, Ed.D., 1940, University of Southern California. Appointed 1939.

WEST, EDNA A.--------------Assistant Professor of Commerce

B.A., Santa Barbara State College; M.A., Claremont Colleges. Appointed 1948.

WHITE, ALFRED E.--------------Registrar; Director of Educational Research;
Associate Professor of Guidance

A.B., 1922, M.A., 1923, University of California; Ed.D., 1941, Stanford University. Appointed 1946.

WOLF, ERNEST M.--------------Instructor in Foreign Languages

Study at the Universities of Berlin, Paris, Muenster, Cambridge and Bonn. Ph.D., 1934, University of Bonn. Post doctoral study at Universities of Cambridge, California at Los Angeles, and Southern California. Appointed 1947.

WRIGHT, WILLIAM H.--------------Professor of Commerce

B.S., 1917, M.A., 1928, University of California, Ph.D., 1943, University of Southern California. Appointed 1921.

ZIEGENFUSS, GEORGE--------------Assistant Professor of Physical Education

B.A., 1940, University of Washington; M.A., 1947, and one year of graduate study at Teachers College, Columbia. Appointed 1948.

## ASSISTANT INSTRUCTORS

BYRNE, CHARLES T.--------------Assistant in Journalism

A.B., 1948, San Diego State College.

CRAWFORD, RONALD M.--------------Assistant in Biology

A.B., 1948, San Diego State College.

DRESCHER, ROBERT C.--------------Assistant in Chemistry

A.B., 1948, San Diego State College.

FLEMING, GEORGE M.--------------Assistant in Education

A.B., 1949, San Diego State College.

GRASTY, GEORGE M.--------------Assistant in Biology

A.B., 1927, University of Texas.

HAYDEN, BERNARR F.--------------Assistant in Education

A.B., 1949, San Diego State College.

HOWARD, FRANCIS J.--------------Assistant in Physics

A.B.1944, University of California at Los Angeles; one year of graduate study at Harvard, Massachusetts Institute of Technology and Scripps Institution of Oceanography.

LEWIS, WILLIAM M.--------------Assistant in Biology

A.B., 1949, San Diego State College.

MILLER, HAROLD C.--------------Assistant in Education

A.B., 1949, San Diego State College.

PUTNAM, WILLIS A., JR.--------------------Assistant in Physics
B.S., 1948, Southwestern Louisiana Institute.

RUSK, JAMES H., JR.--------------------Assistant in Physics
A.B., 1948, San Diego State College.

RUTLEDGE, CLYDE K.--------------------Assistant in Physics
A.B., 1948, San Diego State College.

## LECTURERS

ANDREWS, JULIA G. (Mrs. F. S.)--------------------Lecturer in Art
A.B., Northwestern University; M. A. Columbia University; two years graduate study at Teachers College, Columbia. At San Diego State College since 1947.

BARNES, DR. MELVIN W.--------------------Lecturer in Education
Coordinator Extension Services, San Diego City Schools, University of California and San Diego State College. At San Diego State College since 1947.

BLAKE, DEAN--------------------Lecturer in Meteorology
Meteorologist, U. S. Weather Bureau. At San Diego State College since 1927.

BURGERT, ROBERT H.--------------------Lecturer in Education
San Diego City Schools. At San Diego State College since 1948.

CHERNY, GEORGE V.--------------------Lecturer in Physical Education
Self employed. At San Diego State College since 1949.

COLLINS, MYRON D.--------------------Lecturer in Music
Professional musician. At San Diego State College since 1948.

CONSIDINE, CHARLES R.--------------------Lecturer in Commerce
Industrial Engineer; Public Accountant. At San Diego State College since 1946.

DIRKS, JOHN H.--------------------Lecturer in Art
Self employed. At San Diego State College since 1947.

GELCHER, JOSEPH--------------------Lecturer in Commerce
Insurance Underwriter. At San Diego State College since 1946.

GOODWIN, JOHN H.--------------------Lecturer in Commerce
Insurance broker. At San Diego State College since 1947.

HUFF, GEORGE D., M.D.--------------------Lecturer in Health and Hygiene
Practicing physician. At San Diego State College since 1939.

HUNTINGTON, LUCILE H. (Mrs.)--------------------Lecturer in Commerce
Self employed. At San Diego State College since 1949.

JENKINS, DR. ROBERT E.--------------------Lecturer in Education
Director of Research, San Diego City Schools. At San Diego State College since 1948.

JUSTICE, PRESTON G.--------------------Lecturer in Commerce
Preston Justice Advertising Agency. At San Diego State College since 1948.

KOEPPE, DR. CLARENCE E.--------------------Lecturer in Geography
B.S., 1914, Colgate University; A.M., 1927, Ph.D., 1929, Clark University. At San Diego State College since 1948.

LEACH, RAYMOND E.--------------------Lecturer in Biology
San Diego County Health Department. At San Diego State College since 1949.

LINDSLEY, BYRON F.--------------------Lecturer in Commerce
Attorney at law. At San Diego State College since 1947.

MARSHALL, JOHN A.--------------------Lecturer in Commerce
Divisional Merchandise Manager, Sears Roebuck & Co. At San Diego State College since 1949.

McLEES, BERTRAM ---------- Lecturer in Commerce

Deputy District Attorney. At San Diego State College since 1946.

McMAHAN, ROLAND J. ---------- Lecturer in Commerce

President, McMahan's Furniture Stores. At San Diego State College since 1948.

PANOSH, ANNA M. (Mrs. L. C.) ---------- Lecturer in Spanish

A.B., University of Denver. One year graduate study at University of Mexico, Centro de Estudios Historicos and University of California. At San Diego State College since 1946.

SMALL, DR. ARNOLD M. ---------- Lecturer in Psychology

Head of Psychological Studies Division, U. S. Navy Electronics Laboratory. At San Diego State College since 1948.

SNODGRASS, HERMAN G. ---------- Lecturer in Political Science

Civil Service Training Officer, U. S. Naval Air Station. At San Diego State College since 1948.

STANIFORTH, ROBERT O. ---------- Lecturer in Commerce

Swing & Scharnikow, Attorneys. At San Diego State College since 1948.

STEINBERG, GERTRUDE H. (Mrs. Wm.) ---------- Lecturer in Home Arts

B.S., University of Arizona; graduate study at University of Arizona and Oregon State College. At San Diego State College since 1949.

SYLVESTER, HELEN K. ---------- Lecturer in Education

Principal, Euclid School. A.B., San Diego State College.

TROGE, RALPH F. ---------- Lecturer in Education

Principal, Woodrow Wilson Junior High School. B.S., 1923, Northern Normal and Industrial School; M.A., 1930, Ed.D., 1940, University of Oregon.

VAN CLEAVE, MAURICE ---------- Lecturer in Commerce

B.S., 1919, U. S. Naval Academy. At San Diego State College since 1948.

WILEY, JOAN G. (Mrs. J. N.) ---------- Lecturer in Psychology and Sociology

B.A., M.S.S., University of Buffalo. At San Diego State College since 1947.

WOLFER, DONALD P. ---------- Lecturer in Political Science

Assistant to the City Manager of San Diego. At San Diego State College since 1948.

## MEDICAL STAFF

| | |
|---|---|
| O. S. Harbough, M.D. | Medical Examiner |
| James R. Phalen, M.D. | Medical Examiner |
| Frances E. White, M.D. | Medical Examiner |
| Marilyn M. Fenwick, P.H.N. | Nurse |

## ADMINISTRATIVE OFFICE STAFF

| | |
|---|---|
| Amelia F. Barnes | Mimeograph Office |
| Anne T. Brown | Admissions Secretary |
| Evadne Deardorf | Assistant Registrar |
| Gertrude K. Dickinson | Senior Account Clerk, Business Office |
| Jacqueline Farquhar | Registrar's Office |
| Carey D. Folger | Senior Account Clerk, Business Office |
| Lorraine Griffore | Intermediate Stenographer Clerk, Business Office |
| Genevieve M. Hamblen | Secretary, Personnel Services Center |
| Irene Janeck | Secretary, Physical Science Division |
| Constance King, B.S. | Secretary to Dean of Women |
| Fay Landweer, A.B. | Secretary to Director of Summer Sessions and Chairman of Social Science Division |
| Patricia Lindsay | Intermediate Typist Clerk, Business Office |
| Ruth E. Little, A.B. | Mimeograph Office |
| Jean F. McGhee, B.S. | Credentials Secretary |
| Miriam E. Moore, A.B. | Secretary to Dean of Arts and Sciences and Dean of Education |
| Donald G. Parker | Senior Account Clerk, Business Office |
| Marion L. Parker, M.A. | Statistician |
| Martha E. Perrill, A.B. | Recorder |
| Helen M. Perry | Registrar's Office |
| Katherine Pyle, A.B. | Secretary, Veteran's Office |
| Marjorie Rand | Intermediate Stenographer Clerk, Business Office |
| Doris L. Reese | Assistant Secretary to Dean of Arts and Sciences and Dean of Education |
| Nina M. Schnars | Junior Account Clerk, Business Office |
| Florence Schneider | PBX Operator |
| Ruth C. Seagren | Secreary to Dean of Men |
| Dorothy P. Slough | Secretary, Placement Office |
| Grace A. Smith | Secretary, Secondary Education Office |
| Janice E. Stanley, A.B. | Assistant Secretary to President and Dean of Students |
| Evelyn J. Steel | Secretary, Audio-Visual Services |
| uanita Stephenson | Registrar's Office |
| Emma M. Struthers | Secretary to President and Dean of Students |
| Betty L. Ulics | Junior Account Clerk, Business Office |
| Florence E. Wiggins | Secretary, Campus Laboratory School |
| Robert J. Williams, A.B. | Assistant Director of Placement |

## MAINTENANCE STAFF

| | |
|---|---|
| Timothy Hallahan, A.B. | Supervisor of Buildings and Grounds |
| William Duns | Head Gardener |
| Floyd A. Kirkpatrick | Head Custodian |
| Myrlen Southworth | Engineer |

## LIBRARY STAFF

| | |
|---|---|
| ohn Paul Stone, Ph.D. | Head Librarian |
| Callie D. Becker, A.B., A.B. in Library Science | Junior Librarian |
| Elizabeth C. Cunkle, A.B., B.S. in Library Science | Junior Librarian |
| Margaret H. Demaray, A.B., and Certificate in Librarianship | Senior Librarian |
| ula Germann, B.S. | Senior Librarian |
| Mary Elizabeth Harrison | Book Repair Clerk |
| Geraldine K. Hayes, A.B., B.S. in Library Science | Senior Librarian |
| Frances F. Hemenway | Junior Typist Clerk |
| Phyllis Jean Hord | Junior Typist Clerk |
| Helen M. Jacobsen, A.B., and Certificate in Librarianship | Junior Librarian |
| Genevieve Kelly, A.M. | Senior Librarian |
| Mildred H. LeCompte | Secretary to Librarian |
| oan Marie Mariner | Junior Typist Clerk |
| Rose Marie Perez., B.A., B.S. in Library Science, M.A. | Junior Librarian |
| Harriet B. Stovall | Senior Librarian |
| osephine M. Sutton, A.B. | Junior Librarian |

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# SAN DIEGO STATE COLLEGE

## BULLETIN

## AND

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FOR THE YEAR 1950-1951

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# Announcement of Courses

VOLUME 37

JUNE, 1950

## SAN DIEGO STATE COLLEGE

SAN DIEGO, CALIFORNIA

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# 1950

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| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | | | | | | |

## OCTOBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | | | |

## NOVEMBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | |

## DECEMBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |

# CALENDAR 1950-1951

## SUMMER SESSION, 1950

Term I —June 19-July 28
Term IIA—July 31-August 18
Term II —July 31-September 1

## FALL SEMESTER, 1950-1951

| | |
|---|---|
| July 15 | Qualifying examinations for all entering students (8.30 a.m.-12.30 p.m.). |
| August 1 | Applications for admission must be filed on or before this date. |
| August 19 | Qualifying examinations for all entering students (8.30 a.m.-12.30 p.m.). |
| August 23 | All admission requirements must be completed by this date, including receipt of official transcripts. |
| September 6, 7, 8, 11 | Orientation program. Entering freshmen are required to be on the campus daily to attend all scheduled events and keep all appointments. Other new students are required to keep all scheduled appointments and are strongly urged to attend other events. |
| September 6 | College aptitude test for transfer students registering late. (10-11.30 a.m.) |
| September 8 | Teacher training qualifying examinations for transfer students with at least sophomore standing: Fundamentals test for all teacher training candidates (8.30 a.m.-12 m.); General Culture test for candidates for secondary school credentials (1 p. m.-4.30 p.m.). |
| September 16 | Qualifying examinations for students registering late (8.30 a.m.-12.30 p.m.). |
| September 20 | College aptitude test for transfer students registering late (8.30 a.m.-10 a.m.). |
| September 12-13 | Registration and payment of fees. |
| September 14 | Instruction begins. Late registration fee becomes effective. |
| September 25 | Last date for late registration. |
| September 28 | Applications for admission to teacher education. Little Theatre, 12 m. |
| September 29 | Last date for filing application for M.A. degree. |
| November 3 | Last date for withdrawal from classes. |
| November 23-25 | Thanksgiving recess. |
| December 8 | Last date for filing applications for mid-year graduation. |
| December 16 | Last day before Christmas recess begins. |
| January 2 | Classwork resumes. |
| January 17-24 | Semester examinations. |
| January 24 | End of first semester. |

## SPRING SEMESTER, 1950-1951

| | |
|---|---|
| January 2 | Applications for admission must be filed on or before this date. |
| January 7 | Qualifying examinations for all entering students (8.30 a.m.-12.30 p.m.). |
| January 13 | All admission requirements must be completed by this date, including receipt of official transcripts. |

| | |
|---|---|
| January 27, 29, 30 | Orientation program. All entering freshmen are required to be on the campus daily to attend all scheduled events and keep all appointments. Other new students are required to keep all scheduled appointments and are strongly urged to attend other events. |
| January 27 | College aptitude test for transfer students registering late (8.30 a.m.-10 a.m.). |
| January 29 | Teacher training qualifying examinations for transfer students with at least sophomore standing: fundamentals test for all teacher training candidates (8.30 a.m.-12 m.); general culture test for candidates for secondary school credentials (1 p.m.-4.30 p.m.) |
| January 31 and February 1 | Registration and payment of fees. |
| February 2 | Instruction begins. Late registration fee becomes effective. |
| February 12 | Last date for late registration. |
| February 16 | Last date for filing application for M.A. degree. |
| February 22 | Applications for admission to teacher education, Little Theatre, 12 m. |
| March 19-24 | Spring recess. |
| March 30 | Last date for withdrawal from classes. |
| April 20 | Last date for filing application for June or summer graduation. |
| May 30 | Memorial Day—holiday. |
| May 31-June 7 | Semester examinations. |
| June 7 | End of second semester. |
| June 8 | Commencement. |

## SUMMER SESSION, 1951

Term I —June 18-July 27
Term II—July 30-August 17

# FUNCTIONS OF THE STATE COLLEGES

The state colleges have three major functions, namely: (1) To help the individual student to develop a well-rounded and adjusted personality; (2) to promote in all students civic intelligence and competence; and (3) to create supplies of trained men and women to serve as teachers and officials in the elementary and secondary schools, to fill places of leadership in business and industry, and to transfer to graduate institutions to equip themselves to extend the frontiers of knowledge and to occupy the positions of leadership in various professions. In terms of publicly supported higher education, the state colleges and the university together make provision for the realization of all the essential objectives of higher education in our State.

To achieve their unique purposes the state colleges have developed and are improving offerings as follows:

1. Teacher education curricula for those students who plan to teach, supervise, or administer in the elementary school, the junior high school, and in secondary schools.
2. Preprofessional curricula.
3. Four-year curricula in such fields as business, industry, governmental services, homemaking, and social service.
4. General education for students who take work which leads toward the bachelor's degree or to the higher professions through graduate work.
5. Guidance services to assist the individual student to plan his educational program and to make his college and life adjustments.
6. Extension courses in appropriate fields.

The democratic controls exercised over the state colleges make them readily and effectively responsive to individual and community needs and encourage them continuously to make significant improvements in both curriculum and personal services. The state colleges are thus laboratories in which the facts and theories developed in research, in community living, and in daily association with students are reflected in an instructional program designed to provide educational services inherent in the principle of equality of opportunity.

# THE COLLEGE

## LOCATION AND ENVIRONMENT

Renowned as a winter resort with a mild but invigorating climate, San Diego has become equally famous for its cool summers. High cultural standards in art, music, literature, and science create a stimulating environment for a college. Many of these advantages are to be found in the heritage resulting from the expositions of 1915-16 and 1935-36, including the buildings themselves, which portray the best types of Spanish colonial art and architecture. Housed in these buildings are the Fine Arts Gallery, exhibits in anthropology, natural history, and American archaeology, which are in many respects unsurpassed. The outdoor organ, the Ford Bowl, and the horticultural gardens make Balboa Park, in which all these facilities are located, world renowned. The Scripps Institution of Oceanography, operated by the University of California at La Jolla, gives opportunity for important cooperation in the biological sciences.

## BUILDINGS AND EQUIPMENT

On February 1, 1931, the college was moved to the new campus, located one mile north of the city's principal east-west boulevard, El Cajon Boulevard. The buildings are of Spanish-Moorish architecture which is well suited to the landscape and climate of this region. They include the Academic Building (which houses lecture halls, classrooms and administrative offices) ; the Science Building; the Fine Arts Building; the Library; the Little Theater; the Music Building; the Campus Elementary School; Scripps Cottage (a social clubhouse for women students) ; the Cafe and Book Store; and the Physical Education Building (a structure with adequate facilities for both men and women). The gymnasium contains a very fine basketball floor with stands that will accommodate 1,500 spectators. A fine concrete stadium, constructed in a natural site, has a seating capacity that is adequate for present needs. The open air theater, seating 4,200 persons, serves as a meeting place for large groups.

## FACILITIES FOR THE EDUCATION OF TEACHERS

The college maintains a modern elementary school on the campus where it has developed an extensive program for the education of elementary school teachers. The classroom-laboratory plan which calls for the use of work-rooms, the library, and shops affords unusual opportunities for the induction of students into teaching. By arrangement with the San Diego city and county schools, directed teaching is provided in the elementary and secondary schools.

## THE FACULTY

The professional education of the faculty places the college at the 97 percentile position among teacher education institutions of the Country. For listing and further details see the directory.

## THE LIBRARY

The library facilities of this college are noteworthy for an institution of its size. The library consists of well over 110,000 books and receives more than 700 different periodicals selected to meet the requirements of a modern educational institution. Professionally trained librarians are available to render assistance to students and faculty in their reading and reference work.

The Campus Elementary School Library, representing a collection of 14,000 volumes, possesses equipment and building facilities that are unique.

## ACCREDITATION

San Diego State College is a member of the Northwest Association of Secondary and Higher Schools, the American Association of Colleges for Teacher Education, and the Western College Association.

## LIVING ACCOMMODATIONS

Living arrangements for students whose homes are not in San Diego or within commuting distance are made through the offices of the Dean of Women or the Dean of Men. Women students are urged to live in the residence hall adjoining the campus. Careful consideration is given to study conditions, healthful living, and adequate social opportunities. Room and board may be secured for approximately $275 per semester, payable in four installments. Opportunities to reduce this figure by working a few hours each week are occasionally available. Reservations should be made in advance through the Manager of Quetzal Hall, 5192 College Avenue, San Diego 5, California. Single women students under the age of 21 who find other accommodations more desirable must file with the Dean of Women a statement from the parent or guardian.

## VETERANS' EDUCATION AND HOUSING

The college has been approved by various accrediting agencies to offer courses for veterans leading to the baccalaureate in some 22 major fields and to the master's degree and various teaching credentials. In connection with the Personnel Services Center, a veterans' office is maintained on the campus to facilitate registration, aid in the establishment of benefits, afford special counseling services, and serve as an information center.

Through the City of San Diego, 400 family units formerly under the jurisdiction of the Federal Public Housing Authority have been made available to the college for the housing of its married veterans. These units are located some eight miles from the campus proper at Aztec Terrace, midway between Old Town and Loma Portal. Applications for housing at Aztec Terrace are made through the office of the Dean of Men.

## STUDENT LIFE

A rich field of extracurricular activities is available to the student throughout his college life. The student is urged to select these activities carefully in order that he may profit by such extra-class experiences without lowering his standards of scholarship. The *Student Handbook*, available at the time of registration, gives information concerning activities which include organizations in every department of the college, and opportunities for individual and group experience in the social, athletic, fraternal, religious and governmental life of the campus.

## STUDENT HEALTH SERVICE

The Health Department is maintained for the protection and care of student health. A complete physical examination is required of each student upon admission to college. Careful attention is given to cases undergoing remedial treatment or to cases in which a modification of study load or amount of participation in physical activities seem advisable.

A college physician and school nurse are available for consultation and emergency treatment. Students who have been absent over three days because of illness should receive clearance from the Health Office before returning to classes.

A group plan for accident insurance is in operation for students who desire to participate.

## PERSONNEL SERVICES CENTER

The college offers the services of a trained staff to students who wish help in the solution of problems which are personal, social, academic, or occupational in nature. It is a program designed to help students gain the greatest possible advantage of their college experience. Agencies and facilities cooperating in the effort to assist students include the student health service, reading and study laboratory, the speech improvement program, mathematics clinic, the placement and occupational guidance service, and a staff of personal counselors. Students who wish to take advantage of these facilities may do so through the Personnel Services Center.

## PLACEMENT OFFICE

The Placement Office provides a central source of information on placement opportunities and vocational trends. The staff assists undergraduates in finding part time employment. Full time employment for graduates or former students is facilitated through contacts with schools, businesses, and industries in this locality.

## SCHOLARSHIPS

A number of scholarships for both men and women has been made available through the efforts of the alumni, civic organizations, student organizations, business and professional groups and individuals, and other friends of the college. Superiority in ability and achievement, strength of character, and worthiness from the point of view of need are the standards upon which selection is based. Scholarship aid is limited for the most part to students who have completed at least one semester at the San Diego State College. Except for athletics grants-in-aid, which are initiated through the Director of Athletics, scholarship applications are made through the office of the Dean of Women.

Unless otherwise stipulated, all scholarship awards are determined and announced by the faculty Committee on Loans and Scholarships in October of the college year. Applications for scholarships for the fall semester must be filed with the office of the Dean of Women prior to October 15th. The scholarships available for 1950-51:

**ALPHA GAMMA DELTA.** This sorority presents a $50 award each year to the student in the sorority with the highest grade point average.

**ALTRUSA CLUB.** Two scholarships of $50 each are made available annually by the Altrusa Club of San Diego. Applications are considered from women students enrolled in San Diego State College who are worthy and in need.

**AMERICAN ASSOCIATION OF UNIVERSITY WOMEN.** One scholarship of $100 is given each year in June to a graduating senior who will begin work in an accredited college or university toward a higher degree or credential. The scholarship is made available by the San Diego Branch of the American Association of University Women. Interviews with representatives of that organization are required.

**AMERICAN SOCIETY OF CIVIL ENGINEERS, SAN DIEGO SECTION.** A scholarship of $75 is awarded annually through the San Diego Section of the American Society of Civil Engineers to the engineering student selected for the scholarship on a basis of character, ability, personal qualities, and financial need. Nominations are made by the Engineering Department of the College. At least sophomore status is required for nomination.

**ANONYMOUS (B).** A scholarship of $100 is given each year to be divided among students in financial need, at the discretion of the Committee on Loans and Scholarships. The committee gives consideration to scholastic attainment, financial need, and character.

**ANONYMOUS (E).** A $50 scholarship, awarded each semester through the Committee on Loans and Scholarships, is made available by a public spirited citizen who prefers to assist a student majoring in science.

**ASSOCIATION OF CHILD EDUCATION.** The Association of Child Education makes available each year a $50 scholarship to a student in the Kindergarten-Primary program. The award is customarily made to an upper division student showing promise in a particular field who is in need financially.

**BLUE KEY.** Two scholarships of $50 each are awarded annually by Blue Key. One of these is granted to a needy lower division student of regular standing who has actively participated in student affairs, and the second to an entering freshman who has an outstanding record of achievement in high school activities.

**CAP AND GOWN.** Two $50 scholarships are awarded annually to upper division women students who have attended San Diego State College for at least one year previous to date of making application and who have maintained at least a "B" average in scholarship for their entire college career. The scholarships are made available through the San Diego State College chapter of Cap and Gown.

**CHAMBER OF COMMERCE MUSIC SCHOLARSHIPS.** Several scholarships of $30 per semester have been made available by the San Diego Chamber of Commerce to players of the following instruments in the college band: Solo cornet, solo clarinet, first French horn, first trombone, first baritone, first Sousaphone, and first drum. Applications are filed directly with the Music Department.

**DAUGHTERS OF THE AMERICAN REVOLUTION.** Two scholarships of $25 each are presented each spring, one to a young man and the other to a young woman outstanding in citizenship and Americanism. Applicants should have at least a "B" average in scholarship, should be able to demonstrate need for financial assistance, and should have junior standing in the college when selected. The selection is made by the faculty Committee on Loans and Scholarships and presentation of awards is made at a luncheon on Flag Day, which is given by the Daughters of the American Revolution.

**FACULTY DAMES.** Two scholarships of $50 each are given annually to deserving women students selected by the Loans and Scholarships Committee.

**FLEMING, HARVEY, GOLF.** Through a trust fund set aside for awards to exceptional golf players who enroll in college, scholarships of $250 are given. This is a competitive award.

**FOOTHILL BUSINESS AND PROFESSIONAL CLUB.** Two $25 scholarships, one to a young woman and one to a young man, are given annually. Selections are made by this club from students entering state college from high school.

**FOOTLIGHTS THEATRE, INC.** Annual awards of $50 each are made to members of this Little Theatre group who do outstanding work in dramatic arts.

**FRESHMAN CLASS, 1949-1950.** Two scholarships of $50 each will be awarded in the fall of 1950, one to an entering freshman man and one to an entering freshman woman. The scholarships will be awarded to students who have demonstrated leadership in high school activities. Final selection will be made by the Committee on Loans and Scholarships.

**JONES, SYBIL ELIZA MEMORIAL.** A scholarship of $100 is awarded annually to a student in drama. Applicant must be officially enrolled in at least his fourth semester in speech and drama with participation in dramatic productions on the campus. He must have at least a "C" average in all college work. Applications are made to the Speech Arts Department for action and awards are made after approval of the faculty Committee on Loans and Scholarships.

**KAPPA BETA NU.** A $100 scholarship is offered annually to a junior or senior woman student in elementary teacher education. Applicant must be a resident of San Diego County who is in financial need. Final selection rests with a scholarship committee of Kappa Beta Nu.

**KAPPA DELTA PI.** Two $25 scholarships are awarded annually by Kappa Delta Pi of San Diego State College. Selection for awards is made by the group.

**LA MESA EVENING WOMAN'S CLUB.** One $75 scholarship is awarded by this club to a student entering San Diego State College.

**LA SOCIAS NEUVAS.** Two $50 scholarships are given annually to women students selected by this organization.

**MARCY, MAY FINNEY.** Fifty-dollar scholarships are awarded from this fund to women students in upper division. Applications are made to the Dean of Women and awards made upon recommendation of the faculty Committee on Loans and Scholarships to Mrs. Marcy and a committee of members of Cap and Gown on San Diego State College campus.

**NORTH PARK KIWANI-ANNES.** One scholarship of $50 a semester for a year is awarded annually by this group to a male student preparing for teaching. The recipient must have at least junior standing at the time and be approved by the Committee on Loans and Scholarships.

**P. E. O. (ER CHAPTER).** A sum of $15 a month is granted each year to a woman student enrolled in San Diego State College.

**P. E. O. (DM, HR, AND IZ CHAPTERS).** Scholarships ranging from $35 a semester to $50 a semester are awarded annually from these clubs. Selection is made by the chapter itself or by the Committee on Loans and Scholarships of the college.

**PANHELLENIC (S. D. S. C.).** Fifty dollars annually is given to the sorority girl who has the highest grade point average for the year.

**PI LAMBDA THETA.** An annual scholarship of $50 will be given to a senior student in education. The selection will be made by the fraternity with approval of the Committee on Loans and Scholarships.

**SAN DIEGO BASEBALL CLUB.** An annual scholarship of $250, made available by the San Diego Baseball Club, is distributed to San Diego State College athletes with a principal interest in baseball. Recipients are selected by the Director of Athletics of the college, with the approval of the Committee on Loans and Scholarships.

**SAN DIEGO BUSINESS AND PROFESSIONAL WOMEN'S CLUB.** A $50 scholarship is awarded annually to a worthy young woman attending San Diego State College and majoring in Business Administration and having at least a "C" average.

**SAN DIEGO CITY TEACHERS ASSOCIATION.** Two scholarship of $50 each are presented each year to prospective teachers with no restrictions as to college year. Applications are made on forms supplied by the San Diego City Teachers Association and are reviewed by the association's committee on scholarships. Personal interviews are required, and final selection is made by that committee.

**SAN DIEGO COUNTY TEACHERS ASSOCIATION.** From two to four $100 scholarships are made available annually by this group of teachers. Awards are made to students in the field of elementary education and final selection rests with the Committee on Loans and Scholarships.

**SAN DIEGO ENGINEERS CLUB.** A scholarship of $50 is given each semester by the San Diego Engineers Club to a student majoring in engineering who shows particular ability in that field. Three candidates from all students applying are recommended by the Committee on Loans and Scholarships. These three candidates are interviewed by the members of the Engineers Scholarship Committee, who make the final selection.

**SAN DIEGO PANHELLENIC.** Two $50 scholarships are awarded annually to two upper division women students. Applications are made through the Committee on Loans and Scholarships and selection is left to the discretion of the committee.

**STEINMAN-HILLEL.** Mr. and Mrs. Lou Steinman, members of the San Diego Lasker Lodge of the B'nai B'rith, which sponsors the Hillel organization on the San Diego State College campus, have set aside $400 for scholarships, $50 to be awarded annually for the next 8 years to a student who has done the most to further the cause of interfaith cooperation among the students of the campus. The selection of the awardee shall be made by a committee of three judges.

**STOTT, W. K.** Each June $100 will be awarded a student graduating from San Diego State College who had a major in history. The student must enroll in an accredited college or university to work for a higher degree or credential; must have completed at least two years of upper division work at San Diego State College. Applicant is selected by the Department of History and approved by the Committee on Loans and Scholarships.

**WALKER, RALF MARC.** A scholarship in the amount of $500 is made available by the Walker-Scott Corporation in memory of the late Mr. Ralf Marc Walker to a woman student majoring in merchandising or retail trade at the San Diego State College. The scholarship is presented to a girl in Walker's Hi-Debber Council each year. The total scholarship is deposited in the San Diego State College Foundation and is handed to the recipient at the rate of $50 a semester for each of the first three years and $100 a semester for the two senior semesters.

**WEINBERGER, HENRY, INTERFAITH SCHOLARSHIP.** A scholarship of $100 is awarded in April of each year to the student of any religious faith enrolled at the San Diego State College who is judged to have done the most to further interfaith ideals among the students of the college during the year of the award. This scholarship is made available by Mr. Henry Weinberger of the Lasher Lodge of B'nai B'rith.

**WOMEN'S AUXILIARY OF SAN DIEGO DENTAL SOCIETY.** An annual award of $100 is made available by the Women's Auxiliary of San Diego Dental Society to an outstanding male student in pre-dentistry.

**WOMEN'S CIVIC LEAGUE.** The Women's Civic League sponsors an annual award of $50 to a deserving woman student selected by the league.

## ADDITIONAL DONORS

Additional donors to scholarship funds or to the San Diego State College Foundation include the following:

Al Bahr Temple
Alpha Kappa Alpha
American Association of University women, Coronado
Auxiliary, San Diego County Medical Society
Aztec Athletic Angels
Baranov, Nate
California Congress of Parents and Teachers
Dairy Mart
Del Mar Charities
Delta Sigma Theta (Beta Nu Chapter)
Epsilon Pi Theta
Escondido Junior Women's Club
Fox, George
George, William Robert
Goodwin, Percy
Gildred, Philip
Griffin Properties
Hale, E. T., and Sons
Heilbron, Frances
Herbert Hoover Alumnae Association
Kelly, Mr. and Mrs. Wilbur
Kiwanis Club of San Diego
Lions Club of San Diego
Milk Institute of San Diego County
Nida, W. L.
Pythian Sisters, Grand Temple
Ripley, Robert
Rosenberg Foundation
Rotary Club of Escondido
Simpson, Fred
Small, Lucian K.
Solof's, Ltd.
Sundberg, R. H.
Thursday Club
Todd, O. W., Jr.
Anonymous

## LOANS

Short term loans are available to students who have attended the San Diego State College for at least one semester who have demonstrated ability to do satisfactory college work. Applications for loans are made to the Committee on Loans and Scholarships through the offices of the Dean of Men or Dean of Women.

# ADMISSION AND REGISTRATION

## GENERAL ADMISSION REQUIREMENTS

High school graduates and other applicants possessing equivalent preparation may be admitted to this college upon evidence of fitness to profit by college instruction, such fitness to be shown by previous scholastic records, by evidence of good moral character and personal qualifications, and by satisfactory scores on tests which the college may require. Due to crowded conditions the college probably will have to refuse all qualified applicants who do not file application blanks and official transcripts prior to the dates indicated in the calendar.

## ADMISSION OF HIGH SCHOOL GRADUATES

(1) A high school transcript must be presented showing satisfactory scholarship, and (2) applicants must demonstrate readiness for college instruction by making satisfactory scores on such tests as the college may designate.

**Regular status** will be granted if the student has earned A or B grades in not less than 16 semester courses during the tenth, eleventh, and twelfth grades.

**Provisional status** will be granted if the student has earned A or B grades in not less than 12 semester courses during the tenth, eleventh, and twelfth grades. Individuals who fall slightly below the above standard may be admitted to provisional status if qualifying examination scores indicate probable success in college. One year is allowed for transfer to regular status which may be attained upon completion of 24 or more units of college work with grade average of C or better. Full credit is allowed for all regular college work completed.

**Adult special status** may be granted an applicant who is over 21 years of age or is a veteran of World War II, provided that he demonstrates through qualifying examinations satisfactory ability to do college work. Such students may be transferred to regular status upon removal of all matriculation deficiences and after completion of 24 or more units of college work taken in residence with grade average of C or better. Full credit is allowed for all regular college work completed.

## ADMISSION BY EXAMINATION

Certificates of successful examination before the College Entrance Examination Board will be accepted when candidates cannot meet the above scholarship requirements.

## SPECIAL STUDENTS

In exceptional cases, persons over 21 years of age or veterans of World War II who do not fully meet the college entrance requirements may be admitted as special students upon presentation of evidence showing good character and ability to do satisfactory work at this college. Non-high school graduates shall be required to complete, in addition to the usual requirements for the A.B. Degree, three semester units of college work for each two semester courses lacking high school graduation. College graduate students who do not qualify for admission to graduate status (see admission to graduate status) may be admitted as special graduate students.

## ADMISSION WITH ADVANCED STANDING

Credit earned in recognized institutions of collegiate grade will be evaluated and advanced standing allowed accordingly toward the graduation requirements of this institution. Applicants must show an average grade of C or better for all college work, for the last college attended, and for the last semester of attendance in order to qualify for regular status. A student who enters with advanced standing is one who has completed at least 12 units of passing work in another collegiate institution. However, no applicant may disregard his collegiate record and apply for admission only on the basis of his high school work. No credit earned after a student has accumulated 64 units of work in all types of collegiate institutions may be transferred from a junior college.

Students seeking admission with advanced standing must furnish complete transcripts for all work attempted beyond the eighth grade. If an official evaluation is desired, a deposit of $2 must accompany the application and be received together with all transcripts at least 30 days before the date of registration. At least 45 semester units must be completed before a student may apply for an evaluation.

## ADMISSION TO GRADUATE STUDY

**Graduate status** may be granted to applicants who have regularly applied and have filed official transcripts as evidence of their possession of a bachelor's degree from an accredited institution.

**Graduate special status** is granted to those who are provisionally admitted to graduate study. It is given to a student (1) who has not completed all admission procedures required for graduate status and (2) to a student whose bachelor's degree was earned at an unaccredited college. A student from an unaccredited college will be eligible for graduate status when he has earned a grade point average of 1.5 on 12 or more units of approved upper division work at this College and has cleared all undergraduate deficiencies.

**Admission to candidacy** for the master's degree or for a teaching credential may be achieved by meeting the respective specific requirements.

**Admission to "200" numbered courses** requires graduate status and the meeting of specific prerequisites. A graduate student who may be permitted to enter a "200" numbered course pending full graduate status will be given only upper division credit if graduate status is not achieved by the end of the term in which the course is given.

## DEGREES OFFERED

The following degrees are offered by the College: Bachelor of Arts, Bachelor of Science, and Bachelor of Education. The Master of Arts degree is offered for persons holding valid California teaching credentials.

## EXTENDED DAY PROGRAM

In order to meet the needs of adults in the community for work on the college level, courses are offered in the late afternoon and evening under an extended day program. These courses are on the upper division and graduate levels and carry full college credit. Classes offered under this program consist of those courses normally scheduled as part of the regular college offerings and are taught by staff members of the college, but moved to a late afternoon or evening hour to permit in-service teachers, public personnel, businessmen, and others to attend. These courses cover a wide range of academic and educational subjects including education, commerce, public administration, engineering, and the sciences. A special bulletin describing the current offerings is issued each semester and may be obtained upon request from the Office of the Director of Extension and Extended Day Services.

## EXTENSION PROGRAM

In order to serve more adequately the needs of the community, the college cooperates with off-campus organizations and groups in arranging extension classes in response to expressed needs when the group is sufficiently large to finance the instruction. Offerings are made each semester in a number of departments including education, commerce, and the arts and sciences. Classes may be organized on campus, or at various points within San Diego and Imperial Counties. A minimum of 15 to 20 students is usually required in order to establish a class. The usual class carries two units of credit and meets once a week, either in the late afternoon or evening. The minimum basic fee is $6 per unit. Interested persons desiring detailed information regarding organization of classes or current offerings should contact the Director of Extension Services.

## AUDITORS

Properly qualified persons may apply for admission to attend classes as auditors. Such students pay the same fees as those who take equivalent work for credit.

## TESTS REQUIRED AT REGISTRATION TIME AND LATER

1. A physical examination is required of all students entering or reentering the college after an absence of one semester or more, except that students carrying six units or less are not required to take the physical examination. This examination is scheduled during the orientation period.
2. All entering students are required to take a college aptitude test. Exceptions may be made for graduate students and for those who register for five units or less and for those registered only in Extended Day classes.
3. All entering freshmen and college transfer students who present less than a minimum of 12 units of college credit must take the regular battery of achievement and aptitude tests. The freshman English course which a student will take will be determined by results of these tests.
4. Students entering teacher education should see admission requirements outlined under Admission to Teacher Education.

## LATE REGISTRATION

Students who register after the scheduled registration days are subject to a late registration fee of $2. Students may be accepted for late registration with the approval of the Registrar within two weeks after scheduled registration days. Registration will be closed after that date. Students failing to complete all registration requirements within the period allowed, as announced in registration instructions, are subject to cancellation of registration.

## CHANGES IN REGISTRATION

Petitions for changes in program may be secured at the Registrar's office. A fee is charged for changes in program after registration books are filed.

# FEES AND EXPENSES

## PROBABLE EXPENSES FOR ONE SEMESTER

An estimate of the expense of attendance for one semester is given below. No estimate is made as to the cost of clothing, or other personal items, since these figures vary with the demands of the individual. Laboratory fees are additional.

### A Partial Estimate of Expenses

One Semester

| | *Minimum* | *Maximum* |
|---|---|---|
| Fees | $24.00 | $31.50 |
| Books | 18.00 | 30.00 |
| Board and room | 275.00 | ---- |
| Transportation, lunches, incidentals | 20.00 | 60.00 |
| Miscellaneous | | 5.00 |

Before enrolling in college, the student should possess sufficient resources to meet the minimum expenses for one semester. A limited amount of clerical work in offices and in the library may be offered from time to time but ordinarily it is not sufficiently remunerative to reduce expenses materially.

## LIST OF FEES AND DEPOSITS (SUBJECT TO REVISION)

### Enrollment Fees and Deposits

(Payable at time of registration)

| | |
|---|---|
| By all students: | |
| Tuition (auditors pay same fees as other students): | |
| Regular students (carrying over 5 units) | $6.50 |
| Limited students (carrying 5 units or less) per unit | 2.50 |
| Materials and service: | |
| Regular students | 7.50 |
| Limited students per unit | .75 |
| Student activity fees (not a State Fee): | |
| Regular students | 10.00 |
| Limited students | 2.00 |
| Associated Students Group Accident Insurance | 2.50 |

### Miscellaneous Fees and Deposits

(Fees payable when service is rendered)

| | |
|---|---|
| Change of program | $1.00 |
| Failure to meet administratively required appointment or time limit | 2.00 |
| Evaluation of records for nonmatriculated students | 2.00 |
| Late registration | 2.00 |
| Transcript of record (first copy free) | 1.00 |

### Graduation Fees

| | |
|---|---|
| State teaching credentials (each credential) | $4.00 |
| Diploma | 1.00 |

The credential fee is collected through the college by cashier's check or post office money order made payable to the State Department of Education.

### Summer Session Fees

| | |
|---|---|
| Term I, six units | $36.00 |
| Term II, six units | 36.00 |
| Term IIA, three units | 24.00 |

# GENERAL REGULATIONS

## INFORMATION

All inquiries relative to the college should be directed to the Registrar's Office.

## NUMERING OF COURSES

Courses numbered 1 through 99 are in the lower division; those numbered 100 through 199 are in the upper division; and those numbered 200 or over are in the graduate division. Courses numbered 300 or over are professional education courses on the graduate level.

## SCHOLARSHIP, GRADES, AND GRADE POINTS

The following grades are used in reporting the standing of students at the end of each semester: A, excellent; B, good; C, fair; D, passed; F, failed; I, incomplete; E, conditioned (may be made up to grade of D); Cr. credit (without grade); WP, withdrawal passing; and WF, withdrawal failing.

Grades of I or E must be made up by the end of the next semester; otherwise the grade of F will be recorded.

Grade points are assigned as follows: Grade A, 3 points per unit; B, 2 points per unit; C, 1 point per unit; D, no point per unit; F or WF, no point per unit. Grades of I, Cr, or WP are disregarded in computing grade points. The grade of E is treated as no point per unit until a final grade is recorded. The number of grade points a student has earned in a subject is determined by multiplying the number of points he has received by the number of units allowed. The grade point average is determined by dividing the grade points earned by the number of units attempted. A student must earn at least a C average in all work undertaken at the college to qualify for a degree or a transcript of record with recommendation to another collegiate institution. Any course may be repeated, but not for additional credit; however, only the second grade earned is considered in the student's average.

## CLASS, UNITS OF WORK, AND STUDY LIST LIMIT

Students who have completed 0 to 29 units of work are classified as freshmen; 30 to 59 units as sophomores; 60 to 89 units as junior; and 90 or more as seniors.

A unit of credit represents 50 minutes of lecture or recitation combined with two hours of preparation per week through one semester, or three hours of laboratory or field work in the case of laboratory credit.

Students are not ordinarily permitted to enroll for more than 16 units * for credit toward graduation. A normal semester's program is 15 units.

Certain exceptions to this rule exist. If during the preceding semester the student has carried at least 12 units *: (1) If a grade point average of at least 1.5 was earned, 17 units * may be carried for credit toward graduation; and (2) if a grade point average of 2.0 (B) was earned, 18 units * may be carried.

Exceptions to these regulations may be secured only through a petition to the Scholarship Committee.

No student may register for less than 12 units (the minimum full-time load) without the approval of the Dean of Arts and Sciences or the Dean of Education.

## PROBATION AND DISQUALIFICATION

### PROBATION

Any student whose scholarship record shows a cumulative deficit of nine or more grade points below a C average for all college work undertaken or for all work taken at this College will be placed on probation. Probation may be continued provided the

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* In addition to the required one-half unit physical education activity courses.

student does not increase his grade point deficiency. The student will remain on probation until the grade point deficiency has been reduced below nine for all work undertaken and all work taken at this College.

A student in provisional status who does not reclassify to regular status upon the completion of 24 units of work will be placed on probation. Probation may be continued until the student is reclassified to regular status, provided the grade point deficiency is not increased.

A student with advanced standing from another college who has been admitted on probation by the Board of Admissions will remain on probation until all grade point deficiencies have been removed and an over-all grade point average of 1.0 has been attained.

### DISQUALIFICATION

Any student on probation whose scholarship falls belows a grade point average of 1.0 in any single semester is disqualified from further attendance at the College.

Any student who fails to pass two-thirds of the units attempted during any single semester is disqualified from further attendance at the College.

A disqualified student may be reinstated for reasons satisfactory to the Board of Admissions. Applications for reinstatement must be made on forms which may be obtained at the Office of the Registrar.

## WITHDRAWALS FROM CLASS

Forms for withdrawal from class may be obtained at the Registrar's Office. If a student withdraws from class during the first seven weeks of a semester, a grade of WP will be recorded upon his permanent record for each class which he has dropped. If he withdraws during the remainder of the semester, either a WP or WF will be recorded, depending on whether he is passing or failing the course at the time. WF is equivalent to a failing grade.

## TRANSCRIPTS OF RECORD

Students may secure upon request one transcript of record without fee. Thereafter, a fee of $1 is charged for each transcript secured upon request. Once a student has matriculated in this college, transcripts from other schools will not be returned, or copies of them made. No fees are charged for transcripts required for military purposes.

Transcripts in the possession of students are to be regarded as unofficial records.

## EVALUATIONS

An evaluation of credit for graduation should be requested by a student as soon as 45 units have been earned. Applications may be made at the Office of the Registrar. Students having met all admission requirements for the arts and sciences or teacher education curricula, who are carrying 6 units, or more, of college work in a regular semester, will not be charged the evaluation fee.

## ELIGIBILITY FOR DIRECTED TEACHING

No student shall be eligible for directed teaching (Education 116) leading to the Kindergarten-Primary, General Elementary, General Junior High, and Special Secondary Credentials who has not completed 75 units, been admitted to Teacher Education, and whose entire record, as well as for the preceding semester, does not average at least a 1.2 grade for all credentials except the Junior High and General Secondary Credentials which require a 1.5 grade average.

No student shall be eligible for directed teaching (Education 316) leading to the General Secondary Credential who has not been admitted to the teacher education program prescribed for admission to candidacy for this credential.

## THE HONORS GROUP

All students who at the end of the sophomore year have attained a grade-point average of 2.5, and such others as have attained a high average in the department in which their major is selected, and who have received the recommendation of that department and the consent of the Committee on Honors, may if they so elect, constitute an honors group, for special treatment in their major subject.

Such students, so far as the facilities of the department and the best interests o the students under its charge allow, shall be treated as benefits their individual need and as their individual capacities warrant. They shall be eligible to enroll in honor or special study courses, although credit in such courses shall be limited to 5 units semester. They shall not be held to regular attendance in the established courses of thei departments if, in the opinion of the instructor, the course requirements can be me through special assignments and examinations or by satisfactory performance in th regular examinations in the course. With the consent of the major department, requirements concerning minors and specific courses or sequences in the major may be se aside. Each honor student shall be assigned to a member of his major department fo advice and direction.

Students in the honors group who fail to take advantage of the opportunitie there offered may at the end of any semester be transferred by the department to th general course. Students in the general course who show unusual capacity, upon recommendation of the department and the Committee on Honors, may at the end of an semester, be transferred to the honors group if such transfer appears practicable.

Students who wish to apply for entrance into the Honors group may do so b filling out cards to be obtained from the Registrar's Office. The application should b approved by the major department and by the Honors Committee within the first wee of registration. Units earned by students doing individual study under this plan will b recorded under the symbol 166 and will be subject to the formulated rules dealing wit limitations of student load.

## THE DEGREE WITH HONORS AND WITH DISTINCTION

Upon recommendation of the Committee on Honors, graduation with honors shall be granted to the upper 10 percent of the graduating class. Each department shall determine which students it will recommend for distinction in the major field at graduation, and report its recommendation to the Committee on Honors for transmission to the faculty.

## EXAMINATIONS

No final examination shall be given to individual students before the regular time. Any student who finds it impossible to take a final examination on the date scheduled must make arrangements with the instructor to have an incomplete grade reported and must take the deferred final examination not later than the end of the first semester of attendance following that in which the incomplete was given. No exception shall be made to this rule without the approval of the Dean of Arts and Sciences or the Dean of Education and the instructor concerned.

## CREDIT FOR EXTENSION COURSES

The amount of credit for extension and correspondence courses acceptable in fulfillment of the requirements for the Bachelor of Arts Degree will depend upon the nature of the courses, the quality of the work done, and the student's preparation for work in the field of the course. The college ordinarily limits credit to such courses as have been approved, and the total of such acceptable credit to 12 units. **Extension courses are not accepted for graduate credit.**

## CREDIT GRANTED FOR MILITARY SERVICE

Six units of lower division elective credit will be granted to students who have served in the armed forces of this country upon the completion of the prescribed basic training program before January 1, 1947. Documentary evidence bearing the signature of the proper commanding officer must be filed before credit will be accorded to the student.

Additional units of credit may be granted to students who can document the fact that they have completed officer's or other specialized training, and have been assigned to active military duty before January 1, 1947.

Completion of one semester's work, or 12 units, at this college after military service, is required before military credit will be granted.

# THE BACHELOR OF ARTS DEGREE

## GENERAL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN TEACHER EDUCATION AND IN ARTS AND SCIENCES

### TYPES OF CURRICULA

San Diego State College offers two types of curricula leading to the A.B. degree.
(1) The curricula leading to the California teaching credentials,
(2) The arts and sciences curricula.

### GRADUATION REQUIREMENTS

(a) A minimum of 120 semester units of college work representing a four-year course is required for graduation.

(b) Twenty-four units of work, ordinarily taken in the senior year, must be earned at this college.

(c) At least a C average in scholarship must be maintained in all college work attempted, in all work within the major field, and in all work taken at this college.

(d) At least 40 units must be completed in the upper division, 30 of which must be earned after all lower division requirements have been satisfied.

(e) Student must comply with the State requirements in United States Constitution, American history, institutions, and ideals.

(f) All major, minor, and specific curriculum requirements must be met.

## LOWER DIVISION REQUIREMENTS FOR ALL CURRICULA

| | *Units* |
|---|---|
| Physical Education | 2 |
| Health Education 21 | 2 |
| English | 6 |
| Psychology | 3 |
| Foreign Language (not required in commerce, engineering, or in teacher education in the elementary, junior high and special secondary curricula) | 0–6 |
| Mathematics A and B, 6 units, or high school algebra and geometry | 0–6 |
| Social Sciences | 12 |
| Natural Sciences | 12 |
| Electives to make total of 60 units, including lower division preparation for the major and minor. | |

### EXPLANATION OF LOWER DIVISION REQUIREMENTS

**English**

The English requirement should be satisfied in either the freshman or sophomore year. Unless departmental regulations specify other courses, the student should satisfy this requirement by taking English 1 and either English 2 or any optional course approved by the English Department. The prerequisite for English 1 is a passing mark n the English A qualifying examination or completion of the course in English A. Credit in English A may be used toward graduation but not in satisfaction of the 6-unit ower division requirement in English.

**Psychology**

The requirement in psychology should ordinarily be satisfied in the freshman year by completion of Psychology 1.

**Foreign Languages**

At least six units in one foreign language are required in the lower division except that no language is required in commerce, engineering, or in teacher education in the elementary, junior high, and special secondary curricula.

*Reduction of unit requirement.* Each year-course in one foreign language completed in high school will reduce the lower division requirement by three units; thus, two years in one foreign language completed in high school will satisfy the requirement in full. The last year of a foreign language completed in high school may be repeated in college for credit not to exceed three units toward graduation.

### Social Sciences

Twelve units, at least eight of which are in the lower division, selected from two or more of the following fields in social science are required: anthropology, economics, geography (except 1 and 3), history, political science, social science, and sociology. Eight of the 12 units must be in the lower division. (Note: Courses in commerce, home economics, library science, philosophy, or psychology may not be used in satisfaction of this 12-unit social science requirement.)

*Reduction of unit requirement.* Two high school semester courses in the fields of history, political science, sociology, and economics taken in the senior year with grades of B or better may be used to reduce the 12 unit social science requirement to nine units.

### Natural Sciences

Twelve units, at least eight of which are in the lower division, selected from courses representing each of the following groups, are required:

*(a) Life sciences.* Courses must be selected from one of the following fields: bacteriology, biology, botany, physiology, or zoology. This requirement may be satisfied by completion of a year course in high school or by a semester course in college (recommended: Biology 1). If laboratory credit is desired, select from life science courses listed in section (c) below.

*(b) Physical sciences.* Courses must be selected from the following fields: astronomy, chemistry, Geography 1 or 3 (but not both), geology, physical science, or physics. A semester course in college in any one of these subjects will satisfy this requirement. This requirement may also be satisfied by completion of a year course in high school chemistry or physics. (Students who expect to satisfy this requirement by a physical science course in college should register for the following: those who have not completed a year course in high school in either physics or astronomy, should take Physical Science 1A; those who have not completed a year course in high school in either chemistry or geology should take Physical Science 1B). If laboratory credit is desired, select from physical science courses listed in section (c) below.

*(c) Laboratory course in natural sciences.* This requirement may be satisfied by completion of a year course in high school with grade of C or better for the final semester of the junior or senior year in one of the following fields: botany, chemistry, physics, or zoology. The laboratory requirement may be satisfied by one of the following college courses:

| *Life Sciences* | *Physical Sciences* |
|---|---|
| Bacteriology 1 | Chemistry 1A |
| Biology 10A and 10B | Chemistry 2A and 2B |
| Botany 2A | Geology 1A and 1B |
| Physiology 1C | Physics 4A and 4B |
| Zoology 1A | Physics 2A, 2B, 3A, and 3B |
| | Astronomy 1 and 9 and 10 |

*Reduction of unit requirements.* The 12 unit natural science requirement may be reduced to nine units by completion of a high school year course in biology, botany, chemistry, physics, physiology, or zoology taken in the senior year with grade of B or better for the final semester.

### Mathematics

Mathematics A (elementary algebra) and Mathematics B (plane geometry) are required. This requirement may be satisfied by completion of a year course in high school in algebra and a year course in plane geometry with grade of C or better for the final semester of each course. College credit will be granted for completion of Mathematics A or B unless the corresponding high school course was completed with grade of C or better in which case the repeated course will be classified as a "refresher" course carrying no college credit. Students having one semester high school credit in trigonometry, intermediate algebra or solid geometry may repeat the corresponding course in college for 1½ units of college credit.

### Physical Education

With the exceptions listed, all lower division students must elect one or more courses each semester. Two units of activity credit must be offered for graduation. Exceptions: (a) veterans of World War II; (b) students over 25 years of age. Students carrying fewer than 12 units during any semester may postpone taking physical education, but not be exempted therefrom. No permanent excuses from required activity courses will be granted. The college physician, in conjunction with the chairman of the department, will consider stringent cases on an individual basis and make a recommendation.

### Health Education

The requirement in health education will be satisfied in the freshman year by completion of Health Education 21.

### Lower Division Preparation for the Major and Minor

For description of requirements for majors and minors in teacher education, see section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Teacher Education.

For description of requirements for majors and minors in arts and sciences, see section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences. Specific requirements for each major and minor are listed in connection with the description of courses in each major field. See section entitled: Announcement of Courses.

# UPPER DIVISION REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN ARTS AND SCIENCES

## MAJORS IN ARTS AND SCIENCES

The arts and sciences curricula lead to the Bachelor of Arts degree with majors in **art, botany, chemistry, commerce, economics, engineering, English, French, geography, history, life science, mathematics, music, physics, political science, psychology, romance languages, social science, sociology, Spanish, speech arts, and zoology** and qualify for graduate work in these fields in recognized American colleges and universities. Completion of the requirements of these curricula also enables the graduate to satisfy undergraduate requirements for the general secondary credential which, with graduate work, will enable the holder to teach in a senior high school or junior college.

## MINORS IN ARTS AND SCIENCES

Minors must be established in one of the following fields: **anthropology, art, astronomy, bacteriology, botany, chemistry, commerce, comparative literature, economics, education, engineering, English, French, geography, geology, health education, history, home economics, industrial arts, journalism, life science, mathematics, music, philosophy, physical education, physics, political science, psychology, recreation, sociology, Spanish, speech arts, and zoology.**

## UPPER DIVISION REQUIREMENTS

### Preparation for Upper Division

Students must complete the lower division requirements for all curricula. In addition, lower division requirements for the major and minor must be completed. Refer to the section of this bulletin entitled: Announcement of Courses, and to the outlines of curricula in the section entitled: Preprofessional and Vocational Curricula.

### Minimum Units and Credit Limitations

| Major and minor work are required as follows: | *Units* |
|---|---|
| Minor (minimum in upper division courses) | 9 |
| Major (upper division courses) | 24 |

At least 40 units in upper division courses must be completed, 30 of which must be earned after all lower division requirements have been satisfied. If a student is approaching upper division standing, he may carry sufficient lower division units to complete the required minimum of 60 units and carry upper division units for the remainder of his study load. Students with sophomore standing may carry upper division courses for upper division credit provided that they have the written approval of the chairman of the department and the Dean of Arts and Sciences or Dean of Education.

## MAJORS AND MINORS

### Majors

The specific requirements for each major are listed at the beginning of each departmental division among the description of courses. (See Announcement of Courses.) The student is advised to choose his major as early in his college course as practicable so that he may be able to plan his work according to the major requirements. Failure to meet the lower division requirements of the major department before the junior year may make it impossible to satisfy the upper division requirements within the normal period of two years. In addition to the majors in arts and sciences listed above, the following major is also offered:

**The General Major:** The general major of 36 upper division units must be chosen from three fields with not more than 15 units nor fewer than six to nine units from any one field. A minimum of a year course in each field must be completed in the lower division as foundation for upper division work in the general major. A minor is not required; however, four additional upper division elective units must be completed to meet the minimum requirement of 40 upper division units for graduation.

The general major is planned for students who are preparing for home arts, law, journalism, library work, public administration, social work, theology, recreation, or for any other vocation requiring a background of general training. The program of the student should be planned in consultation with the Dean of Arts and Sciences and approved, revised, or rejected by the departmental advisers of the three majors concerned.

### Minors

A minor consists of at least 15 units of work completed in one of the above fields of study. At least nine of these units must be earned in upper division courses. The entire requirement for a minor may be met with upper division courses provided these courses have no lower division prerequisites. Prerequisites for each course are listed among the course descriptions. (See section on Announcement of Courses.)

## EXAMINATION REQUIREMENTS IN THE UNITED STATES CONSTITUTION AND AMERICAN HISTORY, INSTITUTIONS, AND IDEALS

Each student of a state college to qualify for graduation shall demonstrate competence in the United States Constitution and American history, institutions and ideals, by passing satisfactorily a comprehensive examination on these fields prepared and administered by the college. Students transferring from other institutions of collegiate grade who have already met this requirement may have this examination waived, except that candidates for a teaching credential must meet the United States Constitution requirement by examination or by completion of a course covering the Constitution in a California institution of collegiate grade. The examination ordinarily should be taken in the junior year.

This graduation requirement may be fulfilled by any one of the following alternatives:

1. Passing satisfactorily comprehensive examinations in both United States Constitution and American history, institutions and ideals.
2. Completion of History 17A and 17B, or History 171A and 171B, or History 172A and 172B, or Political Science 71A and 71B, or Political Science 139A and 139B.
3. Completion of Political Science 101, or 137A and 137B, plus satisfactory completion of an examination in American history, institutions and ideals.
4. Completion of History 8A and 8B, or History 173A and 173B, or History 179A and 179B, plus satisfactory completion of an examination of the United States Constitution or the substitutes for that examination enumerated in item 3.
5. Completion of comparable courses in other institutions of collegiate grade, except that candidates for the A.B. degree and a teaching credential must have completed the course covering the United States Constitution in a California institution of collegiate grade.

## PROFESSIONAL, PREPROFESSIONAL, AND VOCATIONAL CURRICULA

For description of professional curricula in education, see section entitled: Professional Curricula in Education; for preprofessional and vocational curricula, see section entitled: Preprofessional and Vocational Curricula.

# UPPER DIVISION REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN TEACHER EDUCATION

## TEACHING CREDENTIALS

San Diego State College is authorized by the State of California to recommend students for the teaching credentials listed below. To be recommended, students must complete, or have completed, the A.B. degree in one of the curricula offered for teachers.

| *The credential* | *Subjects and grades for which it is valid* |
|---|---|
| General Elementary | All grades through the eighth. |
| Kindergarten-Primary | Kindergarten through third. |
| General Junior High (Must be taken with another credential) | All subjects in grades seven, eight and nine in all elementary or secondary schools. |
| General Secondary | All subjects in the public schools in grade 7 and above. |
| Health and Development | Authorizes to serve as supervisor of health in the capacity of a school physician, school nurse, school oculist, school optometrist, school otologist, school audiometrist, school dentist, school chiropdist, or school dental hygienist. |
| Special Secondary in Art | Art in all grades of the public schools. |
| Special Secondary in Business Education | Business education subjects in all grades of the public schools. |
| Special Secondary in Music | Music in all grades of the public schools. |
| Special Secondary in Physical Education | Physical education in all grades of the public schools. |
| Special Secondary in Speech Arts | Speech in all grades of the public schools. |
| Special Secondary in Correction of Speech Defects | Correction of speech defects in all grades of the public schools. |
| Special Secondary for teaching the Mentally Retarded Child | To teach mentally retarded children in elementary and secondary schools. |
| School Psychologist | To serve as school psychologist. |
| School Psychometrist | To serve as assistant to the school psychologist. |
| Administration in Elementary Education | Authorizes for certificate to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in elementary schools. |
| Supervision in Elementary Education | Authorizes for certificate to supervise instruction in elementary schools. |
| Administration in Secondary Education | Authorizes for certificate to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in secondary schools. |
| Supervision in Secondary Education | Authorizes for certificate to supervise instruction in secondary schools. |
| Special Subject Supervision | Supervision in the special subject in all grades. |

## COMBINATION OF CREDENTIALS

Students who seek more than one teaching credential must complete in full the curriculum for each, with only such exceptions as are indicated in the statement of requirements.

A combination of the elementry school credential and the junior high school credential may be secured by completing the requirements for the elementary school credential and the following additional requirements.

(a) A junior high school teaching major.
(b) Education 100B in the major field.
(c) Three units of directed teaching, or equivalent, in a junior high school.
(d) Education 115B.

A combination of the junior high school credential and a special secondary credential may be secured by completing the requirements for the special secondary credential and the following additional requirements:

(a) A junior high school teaching major, excluding the special secondary credential majors.
(b) Education 100B in the junior high school teaching major.
(c) Three units of student teaching in the junior high school teaching major.

## EXAMINATION REQUIREMENTS IN THE UNITED STATES CONSTITUTION, AMERICAN HISTORY, INSTITUTIONS, AND IDEALS

This requirement is the same as that for the degree in arts and sciences. For specific explanation, refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

## UPPER DIVISION REQUIREMENTS

### Preparation for Upper Division

Students in teacher education curricula must complete the lower division requirements for all curricula as indicated in the section entitled: General Requirements for the Bachelor of Arts Degree in Teacher Education and in Arts and Sciences. Additional pattern requirements are outlined under each specific curriculum on the following pages.

### Minimum Units and Credit Limitations

A minimum of 40 units in upper division courses must be completed, 30 units of which must be earned after all lower division requirements have been satisfied. If a student is approaching upper divison standing, he may carry sufficient lower division units to complete the required minimum of 60 units and carry upper division units for the remainder of his study load. Students with sophomore standing may carry upper division courses for upper division credit provided that they have the written approval of the chairman of the department and the Dean of Education.

A maximum of 40 units of credit in any one subject matter field or in education courses may be applied toward the requirements of the A.B. degree.

### Preparation for Graduate Work

Students who take the A.B. degree with a special credential and who contemplate doing graduate work for a master's degree in an academic field or for the general secondary credential, will find it advantageous to use their electives to provide a foundation for that work.

## MAJORS AND MINORS

All teaching curricula require one major and one minor.

### Major and Minor for the Elementary Credential

**Education** shall be the major for the kindergarten-primary and general elementary school credentials. Its requirements are outlined under those curricula. It is recommended that the minor for these credentials be chosen from the academic fields of **English, foreign languages, mathematics, science or social science.** The minor in social science must include 6 upper division units in history or in geography and 3 units selected from anthropology, economics, geography, history, political science, or sociology. The minor in English must include three units in American Literature. A second minor, though not required, may be chosen from one of these fields or from art, home economics, industrial arts, music, physical education or speech arts. Students taking an elementary credential in combination with a special secondary credential may use the special major for their minor in elementary education.

### Teaching Major for Junior High School and Special Secondary School Credentials

A teaching major for the junior high school credential consists of a minimum of 24 units of which a minimum of 18 units must be in the upper division. An average of C in scholarship is required in all upper division courses in the field of the teaching major. Teaching majors may be established in the following fields: **English, foreign languages, general science, mathematics, and social science.** A teaching major in the special secondary credential curricula of art, business education, music, physical education, and speech arts ranges from 24 to 40 units, depending upon the curriculum; these may not be used for a junior high school credential major. Refer to the following pages for outlines of requirements for these credentials.

*A Teaching Major in English* shall include English 1 or 41, and nine units selected from lower division English electives, of which six units must be in a year-course, and 18 units of upper division work. This credit must include three units in American Literature and three units in Shakespeare. Recommended: English 192.

*A Teaching Major in General Science* shall incclude a minimum of 24 units, not less than 18 of which are upper division, including a college year course in a biological science, a year course in high school or college physics and a concentration of 12 units, at least six of which are upper division, in one major subject (botany, chemistry, physics, zoology). See definition of teaching majors.

*A Teaching Major in Social Science* shall include a minimum of 24 units, not less than 18 of which are upper division. There shall be a concentration of 12 units, at least six of which are upper division, in one major subject (anthropology, economics, geography, history, political science, or sociology). A year course in American History must be included. See definition for teaching majors for the junior high school credential.

### Teaching Minor for Junior High and Special Secondary Credentials

A teaching minor consists of 15 units in a given field, of which nine or more must be in upper division courses. Teaching minors may be established in the following fields: **art, business education, English, foreign languages, general science, health education, home economics, industrial arts, mathematics, music, social science, physical education, recreation, and speech arts.** (See requirement above for elementary school credentials.)

*A Teaching Minor in English:* Candidates for the teaching minor in English must include English 1 or 41 and three units of lower division electives; and nine elective units in upper division English. This credit must include three units in American Literature, taken either in lower division or in upper division. Credit in journalism and speech arts may not be used to fulfill the requirements for the English minor.

*A Teaching Minor in Health Education* shall include: Physical Education 51, Health Education 65 and 90 in the lower division; Health Education 152, 153, Physical Education 199 or equivalent in the upper division. For physical education majors, Health Education is allowed only as a second minor area.

*A Teaching Minor in Home Economics* shall include: Home Economics 5, or 62, and 11 in the lower division; Home Economics 101, 105, and 150, in the upper division. Three units of electives may be chosen from Home Economics 1, 62, 135, or 170.

*A Teaching Minor in Industrial Arts:* This minor shall consist of a minimum of 15 units of work in industrial arts, nine units of which must be from courses carrying upper division credit. Required: Industrial Arts 2 or 21, and 121, and at least one lower division and one upper division course in two of the following areas: woodworking, metalworking, and electricity.

*A Teaching Minor in Music:* Candidates for the teaching minor in music are required to take music aptitude tests at the time the minor is chosen and to enroll in at least one music activity each semester. In special cases this requirement may be waived by permission of the faculty of the Music Department.

Applicants for music minors must maintain a grade average of C in all music courses. All students must show credit for Music 1A or clear this requirement by examination. Music 7A is required of all candidates for the elementary credential.

In the lower division, with the proper regard for course sequences, 6 units may be chosen from the following courses: Music, 1A-1B-1C-1D, 2A, 3A, 4A, 4B, 5A, 5B, 6A, 16, 17, 18, Aesthetics 1A, 1B. Nine units of upper division music are required, not more than two of which may be selected for credit from the activity courses ( Treble Clef, orchestra, etc.).

*A Teaching Minor in Physical Education:* Men must show credit for: two professional activity courses and Physical Education 51, 53, and 72 in the lower division; Physical Education 170, 190, and at least four units in upper division professional activity courses approved by the department.

Women must show credit for: four semesters of physical education activity courses, Physical Education 53, and 3½ units of electives in the lower division; nine units chosen from Physical Education 190, 156A-156B, 161, 164, and 170A in the upper division.

*A Teaching Minor in Recreation:* Lower division requirements: Four semesters of physical education activity courses and in addition a minimum of six lower division units to include Physical Education 51, 53, and electives chosen from Art 61B or fields of dance, drama, or music. Upper division requirements: A minimum of nine units, including Physical Education 165, 170A-170B, and 184A. For physical education majors, Recreation is allowed only as a second minor area.

*A Teaching Minor in Social Science:* A teaching minor in social science must include the general education lower division requirement and in addition a minimum of nine units of upper division social science courses, selected from anthropology, economics, geography, history, political science, or sociology, six units of which must consist of a year course sequence. Six units in American History or three units in American History and three units in Political Science must be included.

### Teaching Majors for General Secondary Credential

Teaching majors may be established in the following fields: **art, business education, chemistry, economics, English, history, life science, mathematics, music, physical education, physical science, physics, romance languages, social science, Spanish, and speech arts; also psychology as a nonteaching major with two teaching minors.** In most fields, 12 semester units are required in the lower division and 24 semester units in the upper division. Some departments permit six units of these 24 upper division units to be selected from related fields with the approval of the departmental representative. In addition to these undergraduate requirements two to six semester units of graduate work are required in the major field during the postgraduate year. For the programs for each department, refer to the sections entitled: Curricula Leading to the General Secondary School Credential. This section also explains the requirements for admission to candidacy for the General Secondary Credential. Candidates for the General Secondary Credentials should consult with the Director of Secondary Education during their first registration period at San Diego State College.

### Teaching Minors for the General Secondary Credential

Teaching minors may be established in the following fields: **art, business education, chemistry, economics, English, French, health education, history, home economics, industrial arts, life science, mathematics, music, physical education for men, physical education for women, physics, recreation, Spanish, and speech arts.** In most fields, six semester units are required in the lower division and nine semester units in the upper division for the A.B. degree. This credential requires enough additional units to make a minimum of 21 semester units to be completed by the date of recommendation for the credential. For the programs for each department, refer to the section entitled: Curricula Leading to the General Secondary School Credential.

## ADMISSION TO TEACHER EDUCATION

Students who expect to become teachers should apply for admission to teacher education during the first semester of the sophomore year. Students entering the college at the end of the sophomore year will apply at the beginning of the junior year. No courses in education may be taken until admission is granted; any exception to this rule must have the approval of the Dean of Education. The standards for admission to Teacher Education are different from those for admission to the college; therefore, *admission to the college* does not guarantee that the student will be admitted to teacher education. The following requirements must be met for admission to the teacher education curricula:

1. A satisfactory score on the college aptitude test taken at the college.
2. Evidence of competence in the use of the English language and of satisfactory ability in arithmetic, handwriting, reading, and spelling indicated by having passed the Fundamentals Test. (See college calendar for dates of test which should be taken in the second semester of the *freshman year*.)
3. Assurance of correct speech habits and voice control by having satisfactorily completed a course in corrective speech or by having passed a speech test given by the college.
4. Assurance of physical fitness.
5. If the student is to be a candidate for the general secondary credential or one of the special secondary credentials, he must furnish a recommendation from the chairman of that department stating that the student has ability and shows promise of teaching success in his field and that the department looks with favor upon his application.
6. The completion of the first two years or more of a given curriculum, or its equivalent, and of subsequent work with a grade point average of 1.2 or better for all credentials except the general junior high school or the general secondary, for which shall be required a grade point average of 1.5 or better in all work and 1.75 in the major field.
7. If the student is a candidate for any credential on the secondary school level (general junior high school, special secondary, or general secondary), he must have a satisfactory score on a General Culture Test.
8. If the student is a candidate for the General Secondary credential he must have a tentative program approved by the authorized departmental representative of his major field, minor field, and the education department.
9. All applicants need to be approved by an interviewing committee of the college faculty. In its evaluation the committee will consider the following factors established by the State Board of Education: intelligence, scolarship, professional aptitude, personality and character, speech and language usage, and many-sided interests.

### Transfer Students

Students who have completed two or more semesters of work in another college, upon transferring to San Diego State College, should make application for admission to teacher education as soon as they enroll in the college. Transfer students admitted to the college with either upper division or graduate standing must take the necessary tests for admission to teacher education given during the orientation period at the beginning of their first semester at the college. (See college calendar for dates.)

### Transfer Students With Emergency Credentials in Elementary Education

Certain adaptations in the education courses have been made to meet the needs of experienced teachers who hold an emergency credential in elementary education. See the Director of Elementary Education for details.

### Advanced Standing in Teacher Education

A student transferring into San Diego State College with advanced standing must complete a minimum of six units of professional education work in residence at San Diego State College before recommendation for a credential, regardless of extent of education work already completed elsewhere. Whenever a transfer student has had teaching experience, the college requires that a statement from the employer(s) be filed with the Registrar.

### Evaluation of Credits

After an interval of five years, courses in education are reevaluated and subject to deduction in credit, in light of such new requirements as may have been put into effect and changes in educational procedures. Students formerly in attendance will not be considered to be working in the curriculum until an evaluation and statement of credit has been secured from the Registrar's office. All courses taken either at this college or elsewhere must be approved by an official adviser in order to be credited toward meeting degree requirements.

# PROFESSIONAL CURRICULA IN EDUCATION

Professional curricula in education, requiring from four to five years to complete, lead to the teaching credentials.

All candidates in teacher education curricula should observe carefully the requirements for admission to teacher education and be prepared to meet them at the end of the sophomore year. Students in other colleges who contemplate transferring to San Diego State College should arrange their programs so as to meet the requirements of their particular curriculum as early as possible. See college calendar for dates when the Fundamentals Test and General Culture Test will be given. Refer to the section entitled: Admission to Teacher Education.

## CURRICULA LEADING TO THE GENERAL ELEMENTARY, KINDERGARTEN-PRIMARY, OR GENERAL JUNIOR HIGH SCHOOL CREDENTIAL

### A.B. DEGREE WITH GENERAL ELEMENTARY OR KINDERGARTEN-PRIMARY CREDENTIAL

One teaching minor is required. Refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Teacher Education.

| | Gen. Elem. | | Kdg.-Primary | |
|---|---|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* | *1st Sem.* | *2d Sem.* |
| Physical Education (activity courses) | ½ | ½ | ½ | ½ |
| Art 6A-6B, Design | 2 | 2 | 2 | 2 |
| English 1, Freshman Comp., English 2, Freshman Lit. | 3 | 3 | 3 | 3 |
| Health Educ. 21, Principles, Psychology 1, General | 2 | 3 | 2 | 3 |
| Physical Science 1A-1B, Introduction (if chemistry and physics completed in high school, substitute other science. See course description.) | 3 | 3 | 3 | 3 |
| Electives, including social science, minor, or other lower division requirements | 6 | 6 | 6 | 6 |
| | 16½ | 16½ | 16½ | 16½ |
| **Sophomore Year** | | | | |
| Physical Education (activity courses) | ½ | -- | ½ | -- |
| Art 61A, Crafts in the Elementary Schools | 2 | -- | 2 | -- |
| Biology 1, Survey (if no laboratory course in high school, take 10A-10B or Botany 1) | 3 | -- | 3 | -- |
| Geography 1, Elements (natural science credit) and Geography 2, Regions (social science credit) | 3 | 3 | 3 | 3 |
| Music 1A, Musicianship, and 7A, Materials for Elem. School | 3 | 3 | 3 | 3 |
| Music 28A-28B, Piano (or equivalent by examination) (may be taken in the junior year) | -- | -- | 1 | 1 |
| Speech Arts 1, Voice and Diction | -- | -- | -- | 3 |
| Spanish 70, Span. for Elem. Sch. Teachers (not required but recommended if no high school Spanish) | -- | 3 | -- | -- |
| Physical Education 53, P.E. in Elem. Sch. | -- | 2½ | -- | 2½ |
| Electives (complete lower division requirements and minor) | 4 | 4 | 3 | 3 |
| | 15½ | 15½ | 15½ | 15½ |

### Junior Year

Students transferring from another curriculum in lower division or from another college or junior college may interchange this semester with semester II of the senior year. (Forty units of upper division work are needed.) The Education Department will probably find it necessary to ask some students who have met all requirements to defer entering practicum until the second semester of the junior year in order to equate class size. Those who defer entering the practicum should use this semester to

1. Complete lower division requirements in art, music, Physical Education 53, natural science, social science and others as needed.
2. Complete minor requirements.
3. Meet requirement for American History and U. S. Constitution.
4. Elect Education 102A or 102B if needed to complete program. Permission to enter these courses must be secured from the instructor.

| | Gen. Elem. | | Kdg.-Primary | |
|---|---|---|---|---|
| | *1st Sem.* | *2d Sem.* | *1st Sem.* | *2d Sem.* |
| Educ. 102A, Measurement, and 102B, Child Growth and Development | 3 | 3 | 3 | 3 |
| Health Educ. 151, For Teachers (taken with practicum) | 2 | -- | 2 | -- |
| Education 147, Practicum-Primary Level | 10 | -- | 10 | -- |
| Reading and Elem. Methods (3), Arithmetic (3), Elem. Music Educ. (1), Elem. Art Educ. (1), Language Arts (2) | | | | |
| Proficiency in use of audio-visual equipment is required by examination. Specific instruction in audio-visual materials is given in each subject matter methods course. | | | | |
| Education 148, Practicum-Intermediate Level | -- | 12 | -- | 8 |
| Elem. Social Studies and Science Educ. (3), Elem. Art Educ. (1), Elem. Music Educ. (1), Educ. Psychology (3), Additional 4 units for Gen. Elem. but not Kdg.-Primary, Curriculum in Elem. Educ. (2), Directed Teaching (2) | | | | |
| Education 116, Directed Teaching, primary grades | -- | -- | -- | 4 |
| | 15 | 15 | 15 | 15 |

### Senior Year

| | Gen. Elem. 1st Sem. | Gen. Elem. 2d Sem. | Kdg.-Primary 1st Sem. | Kdg.-Primary 2d Sem. |
|---|---|---|---|---|
| Education 116, Directed Teaching | 7 | -- | 4 | -- |
| Education 146, Kdg.-Primary Practicum (follows Education 148) | -- | -- | 4 | -- |
| Education 115A, Hist. and Phil. of Educ. (or in second semester) | 2 | -- | 2 | -- |
| Electives (complete the minor) | 3 | 15-17 | 3 | 15-17 |
| | 12 | 15-17 | 13 | 15-17 |

## A.B. DEGREE WITH GENERAL JUNIOR HIGH SCHOOL CREDENTIAL

This credential is granted only in conjunction with a general elementary or a special secondary credential. For information regarding combinations of credentials and for descriptions of majors and minors, refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Teacher Education. Students who intend to work for a general secondary credential or the master's degree should counsel with the Director of Secondary Education upon application to teacher education.

| Freshman Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Natural Science (include Geog. 1, Elements, Biol. 1, Survey, and Phys. Sci. 1A or 1B, Intro. See lower division requirements) | 6 | 3 |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Health Ed. 21, Prin. | 2 | -- |
| Geog. 2, Regions (social science credit) | -- | 3 |
| Electives (to complete lower division requirements) | 4 | 6 |
| | 15½ | 15½ |

| Sophomore Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Psychology 1, General | 3 | -- |
| Speech 2A, Fundamentals | -- | 3 |
| Electives (to include preparation for major and minor and completion of lower division requirements) | 12 | 12 |
| | 15½ | 15½ |

| Junior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Health Educ. 151, H. Ed. for Teachers (either semester) | 2 | -- |
| Educ. 184A, Sec. Sch. | 4 | -- |
| Educ. 184B, Devel. and Learning | -- | 4 |
| Electives (to include major and minor) | 9 | 11 |
| | 15 | 15 |

| Senior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Educ. 100B, Methods in major and minor subjects. (Fall only) | 3 | -- |
| Educ. 184C, Teaching Process | 4 | -- |
| Educ. 116, Directed Teaching | 3 | 3 |
| Electives (to include major and minor) | 5 | 12 |
| | 15 | 15 |

## CURRICULA LEADING TO THE SPECIAL SECONDARY CREDENTIALS

### A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN ART

This course leads to the A.B. degree and to the Special Secondary Credential in Art which entitles the holder to teach art in senior high, junior high, and elementary schools.

| Lower Division | Units |
|---|---|
| P. E. (activity courses) | 2 |
| Aesth. 5, Art Orientation, or 51, Survey of Mexican Art | 2 |
| Aesth. 50, Hist. and Appreciation of Art | 2 |
| Art A-B, Draw. and Comp. | 2–4 |
| Art 6A-6B, Design | 4 |
| Art 14A, Lettering | 2 |
| Art 61A, Crafts in Elem. Schs. | 2 |
| Art 61B, Crafts | 2 |
| Electives in Art | 6–8 |
| Engl. 1, Comp., and 2, Lit. | 6 |
| Health Educ. 21, Principles | 2 |
| Natural Sciences (see lower division requirements) | 9–12 |
| Psychology 1, General | 3 |
| Social Sciences (see lower division requirements) | 9–12 |
| Electives, including minor | 7–10 |
| | 60 |

| Upper Division | Units |
|---|---|
| Aesth. 150, Appreciation and Hist. of Art | 2 |
| Art 160A, Printmaking | 2 |
| Art 112A, Design and Composition | 2 |
| Art 116A, Advanced Painting | 2 |
| Art 119A, Ceramics | 2 |
| Art 194A, Costume Design | 2 |
| Art 195, Design | 2 |
| Electives in upper division art | 5 |
| Speech Arts 140A, Stage Design | 3 |
| Health Educ. 151, H. Ed. for Teachers | 2 |
| Educ. 184A, Secondary School | 4 |
| Educ. 184B, Development and Learning | 4 |
| Educ. 184C, Teaching Process | 4 |
| Educ. 119, Art in Elem. Sch. | 2 |
| Educ. 100B-A, Methods in Art and in the minor | 4 |
| Educ. 116, Directed Teaching | 6 |
| Electives, including minor | 12 |
| | 60 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN BUSINESS EDUCATION

This course leads to the A.B. degree and to the Special Secondary Credential in Business Education, which entitles the holder to teach business subjects in junior and senior high schools and in junior colleges.

In addition to the following academic requirements, satisfactory evidence of one-half year, or 1,000 hours of approved experience in the field named in the credential must be submitted.

Six areas of specialization are possible for the student majoring in Business Education: *Accounting, Accounting-Secretarial, Merchandising, Real Estate and Insurance, Secretarial,* and *Supervision and Management.*

| **Lower Division** | *Units* |
|---|---|
| Com. A, Bus. Arith. | 1 |
| Com. 1A-1B, Typewriting (placement exam. before enrollment) | 6 |
| Com. 16A-16B, Secretarial Acctg. | 6 |
| Com. 18A-18B, Com'l Law (should be taken in junior year) | (6) |
| Bus. Educ. Subfield requirements: | 9–10 |
| *Accounting:* Any 9 units selected from Com. 20, 21, 24, 25, or 27. | |
| *Acctg.-Secretarial:* Com. 5A-5B (placement exam. before enrollment. May be taken in junior year). | |
| *Merchandising:* Com. 20, 24, 25. | |
| *Real Estate and Ins.:* Any 9 units selected from Com. 20, 21, 24, 25, or 27. | |
| *Secretarial:* Com. 5A-5B (placement exam. before enrollment. Should be taken in sophomore year). | |
| *Supervision and Mgmt.:* Any 9 units selected from Com. 20, 21, 24, 25, or 27. | |
| General college requirements: | 34–40 |
| P. E. (activity courses) (2) | |
| Engl. 8, Bus. Engl. (3) | |
| Engl. 2, Freshman Lit. (3) | |
| Health Educ. 21, Prin. (2) | |
| Psych. 1, General (3) | |
| Geog. 1, Elements (a natural science) (3) | |
| Geog. 10, Economic (a social science) (3) | |
| Natural Science (in addition to Geog. 1) (6–9) | |
| Econ. 1A-1B, Principles (6) | |
| Social Science (in addition to Geog. 10 and Econ. 1A-1B) (0–3) | |
| Speech 2A, Fundamentals (3) | |
| Electives | 0–4 |
| | 60 |

| **Upper Division** | *Units* |
|---|---|
| Com. 103A, Office Mgmt. | 3 |
| Com. 105A-105B, Office Systems | 6 |
| Com. 108, Records Mgmt. | 2 |
| Bus. Educ. Subfield requirements: | 6–10 |
| *Accounting:* Com. 160A, 164A. | |
| *Acctg.-Secretarial:* Com. 160A and 164A or 113A-113B. | |
| *Supervision and Mgmt.:* Com. 153, 154, and Econ. 151. | |
| *Merchandising:* Com. 185, 186, 187A-187B, Art 107. | |
| *Real Estate and Ins.:* Com. 125, 127A, and Econ. 128. | |
| *Secretarial:* Com. 113A-113B. | |
| Education requirements: | 26 |
| Health Educ. 151, for Teachers (2) | |
| Educ. 184A, Sec. Sch. (4) | |
| Educ. 184B, Dev. and Learning (4) | |
| Educ. 184C, Teaching Process (4) | |
| Educ. 100B-BE, Obj. and Curric. in Bus. Educ. (3) | |
| Educ. 100B-T, Methods in Typing (1) | |
| Methods in one of the following subfields: (2) | |
| Educ. 100B-B, Acctg. | |
| Educ. 100B-ME, Merch. | |
| Educ. 100B-S, Shorthand. | |
| Educ. 116, Directed Teach. (6) | |
| Minor | 9 |
| Electives | 4–8 |
| | 60 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN MUSIC

Students intending to become applicants for this credential must show evidence of musical ability before entering the course. They must be able to play artistically upon the piano, music of the grade of the simpler *Songs Without Words* of Mendelssohn or else possess a corresponding degree of proficiency in voice or an orchestral instrument. No credit is given to music majors for the basic courses of Music 1A and Music 7A, but if a deficiency exists in the field of general musicianship, the student will be required to take either or both of these courses without credit.

All music majors are required to enroll in one musical activity each semester. Activities should be included from *both* instrumental and choral groups. In special cases this requirement may be waived by petition to the Music Department. All students are required to pass examinations in applied music in order to receive credit. No credit is allowed to majors in voice or orchestral instruments for any work in piano which is below the level of artistic hymn playing.

Applicants for the Special Secondary Credential in Music must maintain a grade average of C or better in music courses.

This course leads to the A.B. degree with a Special Secondary Credential in Music which will authorize the holder to teach music in the elementary, junior and senior high schools of the State.

A maximum of 40 units in Music may be used toward the A.B. degree. Of these 40 units a maximum of 3 may come from the field of musical activities: Band, choir, chorus, glee clubs and orchestra.

General Language "B" is advised as an elective.

| **Lower Division** | *Units* |
|---|---|
| P. E. (activity courses) | 2 |
| Engl. 1, Comp., and 2, Lit. | 6 |
| Social Science | 9–12 |
| Natural Science | 9–12 |
| Psychology 1, General | 3 |
| Health Educ. 21, Principles | 2 |
| Music 1A-1B-1C-1D, Musicianship | 6 |
| Music 4A-4B, Elem. Harmony | 6 |
| Music 2A, 3A, 6A, Orchestral Instruments | 3 |
| Music 29 or 17, and 18, Applied (Must show 4 units in voice and 4 units in piano. May be taken in lower or upper division.) | 0–8 |
| Music 9, 10, 11, 12, 13, 14, 15, 20, 25, 26, or 30, Activities | 0–3 |
| Aesth. 1A-1B, Survey | 4 |
| Minor (English, social science, or natural science recommended) | 0–6 |
| | 60 |

| **Upper Division** | *Units* |
|---|---|
| Aesth. 102A-102B, Mus. Hist. | 4 |
| Music 105A-105B, Adv. Harmony | 6 |
| Music 106, Counterpoint | 2 |
| Music, 107, Form and Analysis | 2 |
| Music 119A, Instrumental Conducting | 1 |
| Music 120A, Vocal Conducting | 1 |
| Music 121A, Instrumentation | 2 |
| Music 111, 112, 113, 115, 126, or 130, Activities | 3–0 |
| Music 117 or 118, Applied (Must show 4 units in voice and 4 units in piano. May be taken in upper or lower division) | 8–0 |
| Minor | 9 |
| Health Educ. 151, for Teachers | 2 |
| Educ. 184A, Sec. Sch. | 4 |
| Educ. 184B, Devel. and Learning | 4 |
| Educ. 184C, Teaching Process | 4 |
| Educ. 117A, Elem. Mus. Educ. | 2 |
| Educ. 145, Organization and Admin. of Mus. Educ. | 2 |
| Educ. 100B-MU, Methods in music major and in minor subject | 4 |
| Educ. 116, Directed Teaching | 6 |
| | 60 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (MEN)

This course leads to the A.B. degree and to the Special Secondary Credential in Physical Education which entitles the holder to teach physical education in senior high, junior high and elementary schools.

Men majoring in physical education must register for Professional Activities for each semester of the last three years in order to secure adequate skills, methods of teaching and proficiency in officiating. Participation in an intercollegiate sport is recommended.

| **Lower Division** | *Units* |
|---|---|
| Engl. 1, Comp., and 2, Lit. | 6 |
| Speech 2A, Fundamentals | 3 |
| Natural Science (including Biol. 1, Survey, or equivalent; Zoo. 8, Human Anatomy; Physiol. 1A and 1C (if laboratory course needed), Human Physiology; and a physical science, if needed | 9–12 |
| Social Science | 9–12 |
| Psychology 1, General | 3 |
| Health Educ. 21, Principles | 2 |
| Health Educ. 65, Com. Health | 3 |
| Physical Educ. | 10 |
| P.E. 43, 44, Prof. Activ. (4) | |
| P.E. 51, First Aid (2) | |
| P.E. 53, In Elem. Sch. (2) | |
| P.E. 72, Introduction (2) | |
| Minor (Engl., soc. sci. or natural sci. May include requirements listed above) | 0–6 |
| Electives | 3–15 |
| | 60 |

| **Upper Division** | *Units* |
|---|---|
| Health Ed. 151, For Teachers | 2 |
| Educ. 184A, Sec. Sch. | 4 |
| Educ. 184B, Devel. and Learning | 4 |
| Educ. 184C, Teaching Process | 4 |
| Educ. 100B-PE, Methods in P. E. and in minor | 4 |
| Educ. 116, Directed Teaching | 6 |
| Physical Education | 25–26 |
| 145, 146, 147, 148, Prof. Activ. (8) | |
| 155, Appl. Anat. and Kines. (3) | |
| 168, Physiol. of Exercise (3) | |
| 170A or 170B, Rec'l Leadership (2) | |
| 177, Ind. Program Adapt. (3) | |
| 190, Adm. P.E. in Sec. Schs. (3) | |
| Minor | 9 |
| Electives | 1–2 |
| | 60 |

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (WOMEN)

This course leads to the A.B. degree and to the Special Secondary Credential in Physical Education which entitles the holder to teach physical education in senior high, junior high, and elementary schools.

| Lower Division | *Units* |
|---|---|
| Engl. 1, Comp., and 2, Lit. | 6 |
| Speech 2A, Fundamentals | 3 |
| Natural Science (including Biol. 1, Survey, or equivalent; Zoo. 8, Human Anatomy; Physiol. 1A and 1C (if laboratory course needed), Human Physiology; and a physical science, if needed) | 9–12 |
| Social Science | 9–12 |
| Psychology 1, General | 3 |
| Health Educ. 21, Principles | 2 |
| Physical Education | 13 |
| P.E. 1A, Fund. Skills (½) | |
| P.E. 2A, Folk Dancing (½) | |
| P.E. 3A-3B, Mod. Dance. (1) | |
| P.E. 4, Fieldball, Soccer, and Speedball (½) | |
| P.E. 5, Softball, Volleyball, and Hockey (½) | |
| P.E. 6, Basketball (½) | |
| P.E. 12A-12B, Adv. Mod. Dance. (2) | |
| P.E. 13A, Archery (½) | |
| P.E. 14A, Badminton (½) | |
| P.E. 18A, Tennis (½) | |
| P.E. 51, First Aid and Safety (2) | |
| P.E. 53, In Elem. Sch. (2) | |
| P.E. 72, Intro. (2) | |
| Minor | 6 |
| Electives | 3–9 |
| | 60 |

| Upper Division | *Units* |
|---|---|
| Physical Education | 27 |
| 155, Appl. Anat. and Kines (3) | |
| 156A-156B, Sports Methods (4) | |
| 160, Teaching Body Mech. (2) | |
| 161, Folk Dancing Materials and Adv. Techniques (2) | |
| 164A-164B, Methods in Modern Danc. (4) | |
| 168, Physiol. of Exercise (3) | |
| 170B, Rec'l Leadership (2) | |
| 177, Ind. Prog. Adapt. (3) | |
| 185, Tech. of Ind. Sports (1) | |
| 190, Adm. of P.E. in Sec. Sch. (3) | |
| Health Educ. 151, For Teachers | 2 |
| Educ. 184A, Sec. Sch. | 4 |
| Educ. 184B, Devel. and Learning | 4 |
| Educ. 184C, Teaching Process | 4 |
| Educ. 100B-PE, Methods in P.E. and in minor | 4 |
| Educ. 116, Directed Teaching | 6 |
| Minor | 9 |
| | 60 |

(Recommended electives: Art 61B, Health Educ. 90, 65, Home Econ. 61A-61B, Music 1A, Phys. Educ. 11A-11B.)

## A.B. DEGREE WITH SPECIAL SECONDARY CREDENTIAL IN SPEECH ARTS

The following program when satisfactory completed will lead to the A.B. degree with Special Secondary Credential in Speech Arts.

| **Lower Division** | *Units* |
|---|---|
| P.E. (activity courses) | 2 |
| Social Science | 9–12 |
| Natural Science | 9–12 |
| English 1, Comp., and 2, Lit. | 6 |
| Psychology 1, General | 3 |
| Health Educ. 21, Principles | 2 |
| Speech 2A-2B, 11A-11B, 60A-60B, 81. | 6 |
| Speech 55A-55B, or 56A-56B or 55A-56A or 55A-56B or 82, 83 | 6 |
| Speech 1, 61A, B, C, D, or 81 | 3 |
| Speech electives | 5 |
| Minor | 6 |
| Electives | 0–3 |
| | 60 |

| **Upper Division** | *Units* |
|---|---|
| Speech 150 and 176 or 179A | 6 |
| Speech electives selected from 108, 140A, 155, 159A, 161, 182, 191, 192A or 192B | 6 |
| Speech electives | 6 |
| Upper division electives from English Literature | 6 |
| Minor | 9 |
| Health Educ. 151, For Teachers | 2 |
| Education | 22 |
| Educ. 184A, Sec. Sch. | (4) |
| Educ. 184B, Devel. and Learning | (4) |
| Educ. 184C, Teaching Process | (4) |
| 100B-SA, Methods in major and minor | (4) |
| 116, Directed Teaching | (6) |
| Electives | 3 |
| | 60 |

## HEALTH AND DEVELOPMENT CREDENTIAL

Requirements for this credential include:

1. Possession of a valid license issued by the official California state board or agency in charge of his profession in California.
2. Two years of successful experience in the special service to be named in the credential, except for the school nurse.
3. For school nurse only: The completion of six semester hours of work, including courses in:
   - A. Educational Psychology (Education 130)
   - B. Administration of the School Health Program (Health Education 153)
   - C. Social case work, or rural education or child hygiene.

Pattern to be approved by adviser appointed by the Dean of Education.

## SPECIAL SECONDARY CREDENTIAL IN CORRECTION OF SPEECH DEFECTS

This credential is granted only to students who can verify two years of successful teaching experience or four semester hours of superior student teaching completed in an approved teacher education institution and who hold a valid California teacher's certificate, credential, or life diploma of elementary or secondary school grade. Such students must show credit in the following subjects:

| **Lower Division** | *Units* |
|---|---|
| Psychology 1, General | 3 |
| Speech Arts 2A, Fundamentals of Public Speaking, or equivalent | 3 |
| Speech Arts 11A or 11B, Interpretation | 3 |
| Speech Arts electives | 6 |
| **Upper Division** | |
| Speech Arts 150, Phonetics | 3 |
| Speech Arts 221, Articulatory Problems of Speech or Education 176, Problems of Speech Correction and Articulation | 3 |
| Speech Arts 179A-179B or Education 179A-179B, Nervous Speech Disorders | 6 |
| Psychology 131, Foundations of Personality | 2 |

## SPECIAL SECONDARY CREDENTIAL FOR TEACHING THE MENTALLY RETARDED CHILD

An applicant for the special secondary credential for teaching the mentally retarded child must have completed the following minimum requirements:

1. Possession of a valid kindergarten-primary, general elementary, junior high school, or general secondary credential.
2. Completion of 18 semester hours of professional work selected from the following fields:
    - a. Required group: Education 102B or 102C, 181, 182, Art 61A or 161A, directed teaching of the mentally retarded, 3 units.
    - b. Additional work to complete the required total of 18 semester hours selected from any of the following electives: Education 176, 144, Psychology 132, 150, or 151.
3. The 18-unit requirement will be reduced 4 units for each year of verified, successful experience in teaching special classes for mentally retarded children, the total not to exceed 12 units.
4. At least six semester units of the 18 required must have been completed within five years of the time application is made for the credential.
5. Twelve units of work must have been completed at this college.

## SCHOOL PSYCHOLOGIST CREDENTIAL

Each applicant for recommendation for the school psychologist credential shall have completed the following minimum requirements:

1. Possession of a valid general elementary or general secondary credential.
2. One year of successful teaching experience.
3. Possession of a master's degree in psychology or educational psychology.
4. Each applicant must complete the following course requirements:

A. Child development, mental hygiene, and counseling and guidance, including interviewing:

| | *Units* |
|---|---|
| Education 102B, Child Growth and Development, or Psychology 106, Development Psychology | 3 |
| Psychology 132, Personality Adjustment | 2 |
| Psychology 152, Introduction to Methods of Counseling or Education 233, Guidance Counseling Techniques | 3 |

B. Psychology and education of exceptional children, social case practice including field work and clinical psychology:

| | |
|---|---|
| Education 181, Exceptional Children | 3 |
| Sociology 231, Field Work in Social Case Work | 3 |
| Psychology 151, Introduction to Clinical Appraisal or Psychology 211, Advanced Clinical Psychology | 3 |

C. Educational psychology and educational measurements including field work and elementary statistics:

| | |
|---|---|
| Psychology 130, Educational Psychology | 2 |
| Education 102A, Measurement and Evaluation in Elementary Education or Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Psychology 104A, Statistical Methods in Psychology | 3 |

D. Individual and group mental tests including field work:

| | |
|---|---|
| Psychology 105A, Introduction to Psychological Testing | 3 |
| Psychology 105B, Individual Mental Testing | 3 |
| Psychology 205, Advanced Mental Testing | 3 |

E. Remedial instruction including laboratory or classroom practice:

| | |
|---|---|
| Education 144, Diagnosis and Remedial Treatment of Difficulties in Reading | 3 |
| Education 176, Problems of Speech Correction and Articulation or Education, 179A, Nervous Speech Disorders | 3 |

These courses include laboratory practice.

### SCHOOL PSYCHOMETRIST CREDENTIAL

An applicant for the school psychometrist credential must have completed the following requirements:

1. Possession of a California general teaching credential (General Elementary, Junior High School, or General Secondary) or a four-year college course with a bachelor's degree.

2. As a part of the undergraduate or graduate program the applicant must have completed 18 semester units of training distributed approximately as follows and approved by the credential adviser:

- A. Six units selected from the following: Education 102A or Education 102D; Education 102B or Education 102C; and Education 130.
- B. Six units as follows: Education 181 and Psychology 151.
- C. Six units as follows: Psychology 105A and Psychology 105B.

## CURRICULA LEADING TO THE GENERAL SECONDARY SCHOOL CREDENTIAL

### INFORMATION CONCERNING THE GENERAL SECONDARY SCHOOL CREDENTIAL

A candidate for this credential must complete the requirements for the bachelor's degree from an accredited institution with a major and a minor commonly taught in the secondary schools of California. Admission to candidacy for this credential should be sought during the second semester of the sophomore year or immediately upon admission to San Diego State College with advanced or graduate status. For admission requirements, refer to the section entitled: Admission to Teacher Education.

Students desiring a major in art, business education, music, physical education or speech arts should complete the requirements for the Special Secondary Credential in the respective area desired, then continue with the graduate program. For further details regarding these majors, refer to the sections entitled: Curricula Leading to the Special Secondary Credentials and to Majors and Minors for the General Secondary Credential.

Students desiring one of the other areas as a major for which San Diego State College is authorized should complete a program leading to the A.B. degree at the end of four years and the General Secondary Credential upon completion of the graduate year requirements outlined on the following pages. For a list of majors and minors, refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Teacher Education.

Any person desiring this credential should consult with the Director of Secondary Education during his first semester of attendance at San Diego State College.

### RECOMMENDED PROGRAM FOR THE GENERAL SECONDARY SCHOOL CREDENTIAL

The following courses should be completed before receiving the bachelor's degree (in the order listed):

| | *Units* |
|---|---|
| Education 184A, The Secondary School | 4 |
| Education 184B, Development and Learning | 4 |
| Education 184C, The Teaching Process | 4 |
| Health Education 151, Health Education for Teachers | 2 |

The graduate work must consist of a minimum of 24 semester units of upper division or graduate work including the following specific requirements:

1. At least 12 semester units must be completed at San Diego State College.
2. At least one course of graduate level work (200 number) in the major field.
3. Enough units to complete a 21 semester unit minor. Refer to the section entitled: Majors and Minors for the General Secondary Credential.
4. Professional Education—completion of the courses listed above and the following:

| | |
|---|---|
| Education 100B, Methods of Teaching (in the major and minor subjects) (available Fall Semester only) | 4 |
| Education 250, Curricular Problems of the Secondary School | 3 |
| Education 230, Guidance Problems of the Secondary School | 3 |
| Education 316, Directed Teaching (or equivalent) | 6 |

## MAJORS AND MINORS FOR THE GENERAL SECONDARY CREDENTIAL

The following pages outline tentative programs for the majors and minors for which San Diego State College is authorized to recommend for the General Secondary Credential. Every candidate for the General Secondary Credential must have a program approved in writing by the departmental representatives in his major and minor teaching fields and in education.

### Major in Art

The requirements for the A.B. degree and the Special Secondary Credential in Art should be completed simultaneously. (Students transferring from another institution with the A.B. degree and a major in art should consult with the departmental representative for special program planning.) Refer to the section entitled: A.B. degree with Special Secondary Credential in Art. After the above requirements have been met, and the candidate has been accepted by the art staff for graduate work in art, the candidate for the General Secondary Credential shall complete a graduate year including the following courses in his major:

| *Graduate Year* | *Units* |
|---|---|
| Art 200A-200B, Special Problems in Art | 4 |

### Minor in Art

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| Art A-B, Drawing and Composition | 2–4 |
| Art 6A-6B, Design | 4 |
| Art elective (Art 14A, Lettering, recommended) | 0–2 |
| Aesthetics 50, Appreciation and History of Art | 2 |
| Aesthetics 5, Art Orientation, or Art 51, Survey of Mexican Art | 2 |
| *Upper Division* | |
| Upper division electives in Art | 9 |
| Aesthetics 150, Appreciation and History of Art | 2 |

### Major in Business Education

The requirements for the A.B. degree and the Special Secondary Credential in Business Education must be completed simultaneously. Refer to the section entitled: A.B. degree with Special Secondary Credential in Business Education. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year including the following courses in his major:

| *Graduate Year* | *Units* |
|---|---|
| Select four units from the following: | |
| Commerce 203, Secretarial Administration | 2 |
| Commerce 213, Problems in Business Education | 2 |
| Commerce 223, Problems of Distributive Business | 2 |
| Commerce 233, Administration and Supervision of Business Education | 2 |
| Commerce 260, Advanced Problem Analysis (Accounting) | 2 |

### Minor in Business Education

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

This minor is not approved as part of the requirements for the A.B. degree unless the degree and a credential are awarded simultaneously. It is recommended as a second minor area only.

| | |
|---|---|
| *Lower Division* | |
| Commerce 14A-14B, Principles of Accounting | 6 |
| Economics 1A-1B, Principles of Economics | 6 |
| *Upper Division* | |
| Upper division commerce courses selected with approval of the departmental representative | 9 |

### Major in Chemistry

| | Units |
|---|---|
| *Lower Division* | |
| Chemistry 1A-1B, General | 10 |
| Chemistry 5, Quantative Analysis | 3 |
| Mathematics 7A-7B, Mathematical Analysis, or 3A-3B, Plane Analytic Geometry and First Course in Calculus, and 4A-4B, Second and Third Course in Calculus | 6–12 |
| Physics 2A-2B, General, and 3A-3B, Physical Measurements (or 4A-4B-4C, Principles) | 8–12 |
| *Upper Division* | |
| Chemistry 101, 102, 103, Organic Chemistry | 10 |
| Chemistry 105, Advanced Quantitative Analysis | 3 |
| Chemistry 110A-110B, Physical Chemistry | 6 |
| Electives in upper division chemistry, or electives in a related field approved by the departmental representative | 5 |
| *Graduate Year* | |
| Chemistry 200, Seminars | 4 |

### Minor in Chemistry

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| Chemistry 1A-1B, General | 10 |
| Chemistry 5, Quantitative Analysis | 3 |
| Physics 2A-2B, General, and 3A-3B, Physical Measurements (or 4A-4B-4C, Principles) | 8–12 |
| *Upper Division* | |
| Chemistry 101, Organic | 4 |
| Electives in upper division chemistry selected with approval of departmental representative | 5 |

### Major in Economics

| | |
|---|---|
| *Lower Division* | |
| Economics 1A-1B, Principles of Economics | 6 |
| Lower division year course in history, political science or sociology | 6 |
| *Upper Division* | |
| Economics 100A-100B, Intermediate Economic Theory | 6 |
| Economics electives, including a maximum of six units in a related field approved by the departmental representative | 18 |
| *Graduate Year* | |
| Economics 200A-200B, Seminar in the Development of Economics | 4 |

### Minor in Economics

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| Economics 1A-1B, Principles of Economics | 6 |
| A year course in another social science area | 6 |
| *Upper Division* | |
| Economics 100A, Intermediate Economic Thought | 3 |
| Upper division economics courses selected under the supervision of the departmental representative | 6 |

### Major in English

| | Units |
|---|---|
| *Lower Division* | |
| English 1 or 41, Composition | 3 |
| One year-course from lower division English electives | 6 |
| Lower division English electives | 6 |
| *Upper Division* | |
| Upper Division English courses selected under the supervision of the departmental representative | 24 |
| *Graduate Year* | |
| One of the graduate seminars | 2 |
| English 192, The English Language (if not taken as an undergraduate) or 191, 195, or an additional seminar | 2–3 |

### Minor in English

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| Lower division English courses to be selected under supervision of departmental representative | 9 |
| *Upper Division* | |
| Upper division English courses to be selected under the supervision of the departmental representative | 12 |

### Minor in French

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| French 1, 2, 3, 4, 5, 6 or equivalents | 15–16 |
| History 4A-4B, History of Modern Europe, or equivalent | 6 |
| *Upper Division* | |
| French 101A-101B, Conversation and Composition | 6 |
| French Literature (select one course) | 3 |

### Minor in Health Education for Men or Women

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed from courses listed below, and from courses in related fields, to be selected on the basis of student's vocational goal under supervision of departmental representative.

Students majoring in physical education may use this as a second minor only. Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | Units |
|---|---|
| *Lower Division* | |
| Health Education 21, Principles of Healthful Living | 2 |
| Physical Education 51, First Aid and Safety Education | 2 |
| Health Education 65, Community Health | 3 |
| Health Education 90, Physiology of Reproduction | 1 |
| *Upper Division* | |
| Health Education 151, Health Education for Teachers | 2 |
| Health Education 152, Health Education Programs | 3 |
| Health Education 153, Administration of School Health Program | 3 |
| Health Education 199, Special Study in Health | 1–3 |

### Major in History

*Lower Division*

| | |
|---|---|
| History 4A-4B, History of Modern Europe, or 8A-8B, History of the Americas, or 9A-9B, History of the Pacific Ocean Area | 6 |
| Political Science 1A-1B, Introduction to Government, or Political Science 71A-71B, American Government and Politics, or Economics 1A-1B, Principles | 6 |

Two of the above history courses are recommended for students planning to major in history, and it is suggested that History 4A-4B be included as one of the courses.

*Upper Division*

| | |
|---|---|
| History 199, Special Course for Advanced Students | 2 |
| United States History course | 3–6 |
| Select from three of the following areas with approval of departmental representative | 16–19 |

1. Ancient and Medieval
2. Modern European
3. Latin America
4. Pacific Area and Far East

*Graduate Year*

| | |
|---|---|
| History 270A-270B, Seminar | 2–2 |

### Minor in History

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed. A year course in United States History must be included.

*Lower Division*

| | |
|---|---|
| History 4A-4B, History of Modern Europe, or 8A-8B, History of the Americas, or 9A-9B, History of the Pacific Ocean Area | 6 |
| Electives chosen from anthropology, economics, geography (except Geography 1, or 3), political science, sociology | 6 |

*Upper Division*

| | |
|---|---|
| Upper Division History selected with approval of departmental representative | 9 |

### Minor in Home Economics

A minimum of 21 semester units, of which at least nine units shall be upper division, must be completed. Candidates selecting this minor must have their programs approved by the departmental representative.

| *Lower Division* | *Units* |
|---|---|
| Home Economics 5, Food Preparation | 3 |
| Home Economics 11, Clothing Design | 3 |
| Electives in Home Economics | 0–3 |
| *Upper Division* | |
| Home Economics 101, Clothing Selection | 3 |
| Home Economics 105, Family Meals | 3 |
| Home Economics 150, Home Management | 3 |
| Home Economics 170, Child Care and Development | 3 |
| Electives in Home Economics | 0–3 |

### Minor in Industrial Arts

A minimum of 21 semester units, of which at least nine shall be upper division courses, must be completed. The candidate must demonstrate competence in mechanical drawing. All candidates selecting this minor must have their programs approved by the departmental representative.

| | | |
|---|---|---|
| *Lower Division* | | |
| Industrial Arts 2, Mechanical Drawing | | 2 |
| Select at least two courses from the following: | | 6 |
| Industrial Arts 41, Elements of Metalwork | 3 | |
| Industrial Arts 51, Elements of Woodwork | 3 | |
| Industrial Arts 61, Elements of Electricity | 3 | |
| *Upper Division* | | |
| Industrial Arts 121, Advanced Mechanical Drawing | | 3 |
| Select at least two courses from the following: | | 4 |
| Industrial Arts 141, Advanced Metalwork | 2 | |
| Industrial Arts 151A-151B, Furniture Making | 2 | |
| Industrial Arts 152, Finishing and Painting | 2 | |
| Industrial Arts 153, Patternmaking and Woodturning | 3 | |
| Electives from Industrial Arts courses selected with approval of departmental representative to complete requirement | | 6–8 |

### Major in Life Science

| | |
|---|---|
| *Lower Division* | |
| Zoology 1A-1B, General | 8 |
| Botany 2A-2B, General or 1, Introduction | 4–8 |
| Zoology 20, Human Anatomy and Physiology | 3 |
| Chemistry -A-1B, General, or 2A-2B, Fundamentals | 6–10 |
| Physics 2A-2B, General, and 3A-3B, Physical Measurements | 8 |
| Geology 1A, Physical, and Astronomy 1, Descriptive, recommended. | |
| *Upper Division* | |
| Upper division Zoology and Botany, of which units may be from a related field with the approval of the departmental representative | 24 |
| *Graduate Year* | |
| Zoology 200, Seminar | 3 |
| Zoology 202, Hydrobiology, or Zoology 213, Advanced Studies in Ornithology | 2 |

### Minor in Life Science

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| Biology 10A-10B, General Biology, or Zoology 1A-1B, General Zoology | 6–8 |
| Botany 2A-2B, General Botany, or Botany 1, Introduction | 4–8 |
| Chemistry 1A, General, or 2A-2B, Fundamentals | 5–6 |
| *Upper Division* | |
| Upper division courses in Zoology and Botany to be selected with approval of the departmental representative | 9 |

**Major in Mathematics**

| | *Units* |
|---|---|
| Mathematics 3A, Plane Analytical Geometry | 3 |
| Mathematics 3B, First Course in Calculus | 3 |
| Mathematics 4A, Second Course in Calculus | 3 |
| Additional mathematics or work in related areas | 3 |

*Suggested courses in related areas:* Astronomy 1, Descriptive Astronomy; Commerce 2, Mathematics of Finance; Engineering 1A, Plane Surveying; Engineering 21, Descriptive Geometery; Physics 4A, Mechanics of Solids and Fluids; Physics 2A, General.

*Upper Division*

| | |
|---|---|
| At least one course in Algebra | 3 |
| At least one course in Geometry | 3 |
| Mathematics 140A, Mathematical Statistics | 3 |
| Mathematics 117, Intermediate Calculus (unless 4B, Third Course in Calculus taken in lower division) | 3 |
| Mathematics 104, History of Mathematics | 3 |
| Additional upper division units, six of which may be in related areas | 9 |

*Graduate Year*

Four units selected from the following:

| | |
|---|---|
| Mathematics 201, Concepts of Geometry from an Advanced Point of View | 2 |
| Mathematics 202, Concepts of Algebra from an Advanced Point of View | 2 |
| Mathematics 204, Advanced Work in the History of Mathematics | 2 |

**Minor in Mathematics**

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

*Lower Division*

**Pattern I**

| | |
|---|---|
| Mathematics 7A-7B, Elementary Mathematical Analysis | 6 |
| Two courses selected from courses in related areas | 6 |

(See above under teaching major in mathematics)

**or Pattern II**

| | |
|---|---|
| Mathematics D, Trigonometry (or high school equivalent for which pattern credit may be allowed) | 3 |
| Mathematics 3A, Plane Analytic Geometry | 3 |
| Mathematics 3B, First Course in Calculus | 3 |
| One course selected from courses in related areas | 3 |

(See above under teaching major in mathematics)

*Upper Division*

| | |
|---|---|
| Upper division units in mathematics selected with the approval of the departmental representative | 9 |

One course in each of the areas, algebra, geometry, and history of mathematics, is desirable.

**Major in Music**

The requirements for the A.B. degree and the Special Secondary Credential in Music should be completed simultaneously. Students transferring from another institution with the A.B. degree and a major in Music should consult with the departmental representative for special program planning. Refer to page 33 for the recommended program for the Special Secondary Credential in Music. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year including 4 units selected from the following courses in his major:

*Graduate Year*

Four units selected from the following:

| | |
|---|---|
| Music 200A-200B, Special Problems in Music | 2–2 |
| Music 203, Musicology | 2 |
| Music 206, Composition | 2 |

### Minor in Music

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

| *Lower Division* | *Units* |
|---|---|
| Music 1A or equivalent, and 1B, Musicianship | 2–5 |
| Music 4A-4B, Elementary Harmony | 6 |
| Aesthetics 1A-1B, Survey of Music | 4 |
| Music activities selected from Music 11, 12, 13, 15, 20, 26, 30 | 0–2 |
| *Upper Division* | |
| Elect 9 units with approval of departmental representative from: | |
| Aesthetics 102A-102B, Music History | 4 |
| Aesthetics 100, Great Music | 3 |
| Music 105A-105B, Advanced Harmony and Composition | 6 |
| Music 106, Counterpoint | 2 |
| Music 107, Form and Analysis | 2 |
| Music 119A, Instrumental Conducting | 1 |
| Music 120A, Vocal Conducting | 1 |
| Music 121A-121B, Instrumentation and Arranging | 4 |
| Music 117A-117B, Advanced Individual Study of Voice | 2 |
| Music 118A-118B, Advanced Individual Study of Piano or Organ | 2 |

### Major in Physical Education for Men

The requirements for the A.B. degree and the Special Secondary Credential in Physical Education must be completed simultaneously. Refer to the section on A.B. degree with Special Secondary Credential in Physical Education. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year including the following courses in his major:

Select two courses from the following:

| | |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |

### Minor in Physical Education for Men

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| *Lower Division* | |
|---|---|
| Physical Education 51, First Aid and Safety Education | 2 |
| Physical Education 53, Physical Education in the Elementary Schools | 2 |
| Physical Education 72, Introduction | 2 |
| Electives | 2–4 |
| *Upper Division* | |
| Professional Activity courses selected with approval of departmental representative | 4 |
| Physical Education 190, Administration of Physical Education in Secondary Schools | 3 |
| Physical Education 170, Recreational Leadership | 2 |
| Electives | 2–4 |

### Major in Physical Education for Women

The requirements for the A.B. degree and the Special Secondary Credential in Physical Education must be completed simultaneously. Refer to the section on A.B. degree with Special Secondary Credential in Physical Education. After the above requirements have been met, the candidate for the General Secondary Credential shall complete graduate year including the following courses in his major:

Select two courses from the following:

| | Units |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education, and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |

### Minor in Physical Education for Women

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

*Lower Division*

| | |
|---|---|
| Physical Education 1A, Fundamental Skills | ½ |
| Physical Education 2A, Folk Dancing | ½ |
| Physical Education 3A, Modern Dance | ½ |
| Physical Education 4, 5, 6, Team Sports | 1½ |
| Physical Education 53, Physical Education in Elementary Schools | 2½ |
| Physical Education electives | 3½–4 |

*Upper Division*

| | |
|---|---|
| Physical Education 156A-156B, Sports Methods | 4 |
| Physical Education 161, Folk Dancing Materials and Advanced Techniques | 2 |
| Electives selected from Physical Education 190, 170B, 164A-164B | 3–6 |

### Major in Physical Sciences

This teaching major may be used as a major for the A.B. Degree if the lower and upper division requirements listed below are completed and the student has been admitted to candidacy for the General Secondary Credential and has completed at least nine units of professional courses in education by the date of degree candidacy.

*Lower Division*

| | |
|---|---|
| Chemistry 1A-1B, General Chemistry | 10 |
| Physics 4A-4B-4C, Principles (or 2A-2B, General, and 3A-3B, Physical Measurements) | 8–12 |
| Mathematics 3A, Plane Analytic Geometry, 3B, First Course in Calculus, 4A, Second Course in Calculus (recommended 4B, Third Course in Calculus) | 9–12 |
| Biology 1, Survey | 3 |

*Upper Division*

| | |
|---|---|
| Twenty-four units in chemistry and physics, with a minimum of nine units in each of these two departments. Six units may be selected from related fields with approval of the departmental representative | 24 |

*Graduate Year*

Select four units from the following:

| | |
|---|---|
| Chemistry 200, Seminar | 2–4 |
| Physics 200, Seminar | 2–4 |

### Major in Physics

| | Units |
|---|---|
| *Lower Division* | |
| Physics 4A-4B-4C, Principles, or equivalent | 12 |
| Chemistry 1A-1B, General | 10 |
| Mathematics 3A-3B, Plane Analytic Geometry and First Course in Calculus | 6 |
| Mathematics 4A-4B, Second and Third Course in Calculus | 6 |
| *Upper Division* | |
| Physics 105A-105B, Analytical Mechanics | 6 |
| Physics 110, Alternating Current Circuits | 3 |
| Physics 102, Basic Electronics or 170, Electromagnetic Theory | 3 |
| Physics 199, Special Study | 2 |
| Electives from upper division physics, with a maximum of six units selected from related areas upon approval of departmental representative | 10 |
| *Graduate Year* | |
| Select four units from the following: | |
| Physics 200, Seminars (both semesters) | 2–2 |

### Minor in Physics

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| Physics 4A-4B-4C, Principles, or equivalent | 12 |
| Chemistry 1A-1B, General | 10 |
| Mathematics 3A, Plane Analytic Geometry, 3B, First Course in Calculus, 4A-4B, Second and Third Course in Calculus | 12 |
| *Upper Division* | |
| Upper division courses to be selected with approval of departmental representative | 9 |

### Major in Psychology

This major can be used for a General Secondary Credential only if the candidate completes *two* teaching minors.

| | |
|---|---|
| *Lower Division* | |
| Psychology 1, General | 3 |
| Psychology 5 and 6, Principles | 6 |
| *Upper Division* | |
| Psychology 104A, Statistical Methods | 3 |
| Psychology 105B, Individual Mental Testing | 3 |
| Psychology 131, Foundations of Personality | 2 |
| Psychology 132, Personality Adjustment | 2 |
| Psychology 151, Introduction to Clinical Appraisal | 3 |
| Psychology 160A, Experimental Psychology | 3 |
| Electives to be selected with approval of the departmental representative | 8 |
| *Graduate Year* | |
| Psychology 201, Seminar in Psychology | 2 |
| Education 230, Guidance Problems in Secondary Education | 3 |

### Minor in Recreation for Men or Women

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

Students majoring in Physical Education may use this only as a second minor. Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | |
|---|---|
| *Lower Division* | |
| Physical Education 51, First Aid and Safety Education | 2 |
| Physical Education 53, Physical Education in Elementary Schools | 2 |
| Electives selected from Art 61B, Crafts, or from the fields of dance, drama or music | 2 |
| *Upper Division* | |
| Physical Education 165, Administration of Community Recreation | 3 |
| Physical Education 170, Recreational Leadership | 3 |
| Physical Education 184, Field Work in Recreation | 1–3 |

### Major in Romance Languages

| | Units |
|---|---|
| *Lower Division* | |
| Spanish 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| French 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| History 4A-4B, or 8A-8B | 6 |
| *Upper Division* | |
| Spanish 101A-101B, Conversation and Composition | 6 |
| French 101A-101B, Conversation and Composition | 6 |
| Spanish 199 or French 199, Comprehensive Reading and Survey Course | 3 |
| Courses in Spanish literature, French literature or Spanish-American literature, selected with the approval of the departmental representative | 9 |
| *Graduate Year* | |
| Spanish 201, Old Spanish | 2 |
| Spanish 204, Seminar in Spanish-American Literature | 2 |

### Major in Social Sciences

This teaching major may be used as a major for the A.B. degree if the lower and upper division requirements listed below are completed and the student has been admitted to candidacy for the General Secondary Credential and has completed at least 9 units of professional courses in education by the date of degree candidacy.

*Lower Division*

A student must complete a minimum of six units in each of at least three fields he may select from the departments named below:

- Economics
- Geography
- History
- Political Science
- Sociology and/or Anthropology

*Upper Division*

A student must complete a minimum of 30 units with the approval of the departmental representative as follows:

| | |
|---|---|
| 1. A minimum of 12 units from any field named above | 12 |
| 2. A minimum of six units from each of two fields named above, excluding the field selected for the major upper division concentration | 12 |
| 3. Electives from social science fields | 6 |

*Graduate Year*

| | |
|---|---|
| Post-bachelor work selected with approval of the departmental representative | 4 |

### Major in Spanish

| | |
|---|---|
| *Lower Division* | |
| Spanish 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| French A-B, or German A-B, or Latin A-B, or their equivalents | 6 |
| History 4A-4B, or 8A-8B | 6 |
| *Upper Division* | |
| Spanish 101A-101B, Conversation and Composition | 6 |
| Spanish 199, Comprehensive Reading and Survey | 3 |
| Upper division courses in Spanish or Spanish-American literature with a maximum of six units which may be selected from related fields with the approval of the departmental representative | 9–15 |
| *Graduate Year* | |
| Spanish 201, Old Spanish | 2 |
| Spanish 204, Seminar in Spanish-American Literature | 2 |

### Minor in Spanish

A minimum of 21 semester units, of which at least nine units be upper division or graduate courses, must be completed.

| | Units |
|---|---|
| *Lower Division* | |
| Spanish 1, 2, 3, 4, 5, 6, or equivalents | 15–16 |
| History 4A-4B, History of Modern Europe, or 8A-8B, History of the Americas, or equivalent | 6 |
| *Upper Division* | |
| Spanish 101A-101B, Conversation and Composition | 6 |
| Spanish Literature (select one course) | 3 |

### Major in Speech Arts

| | |
|---|---|
| *Lower Division* | |
| Speech Arts 1, Voice and Diction, or 2A, Fundamentals of Public Speaking, or 2B, Extemporaneous Speaking, or 11A, Interpretation | 3 |
| Speech Arts 55A-55B, Elementary Acting, or 81, Survey of Radio, and 82, Radio Announcing, or 83, Radio Acting and Directing | 6 |
| *Upper Division* | |
| Speech Arts 150, Phonetics | 3 |
| Speech Arts 154A-154B, History of the Treatre, or 155, Advanced Acting, and any first semester upper division course, or 140A-140B, Stage Design, or 179A-179B, Nervous Speech Disorders, or 192A-192B, Advanced Public Speaking | 6 |
| Speech Arts 179A-179B, Nervous Speech Disorders, or 159A-159B, Stage Direction, or two courses selected from the following: 181, Radio Sales and Advertising, 182, Advanced Radio Production, 183, Radio News Writing and Broadcasting, 184, Radio Writing, or 191, Organized Discussion | 6 |
| Speech Arts 108, Advanced Interpretation, or 118A or 118 B, Playwriting, or 145, Stage Lighting, or 152, Stage Costume, or 154A or 154B, History of the Theatre, or 162, Advanced Argumentation, or 176, Problems of Speech Correction and Articulation | 3 |
| A maximum of six units may be selected from related fields with approval of departmental representative | 0–6 |
| *Graduate Year* | |
| Select four units from the following courses: | |
| Speech Arts 260, Seminar in Oral Interpretation | 2 |
| Speech Arts 221, Seminar in Articulatory Problems in Speech | 2 |
| Speech Arts 245, Seminar in Technical Practice | 2 |
| Speech Arts 259, Seminar in Stage Direction | 2 |
| Speech Arts 200, Seminar in History or Oratory | 2 |

### Minor in Speech Arts

A minimum of 21 semester units, of which at least nine units shall be upper division or graduate courses, must be completed.

| | |
|---|---|
| *Lower Division* | |
| Speech Arts 2A-2B, Fundamentals of Public Speaking and Extemporaneous Speaking; or 55A-55B, Elementary Acting; or 56A-56B, Dramatic Production; or 55A, Elementary Acting, and 2A, Fundamentals of Public Speaking, or 2B, Extemporaneous Speaking; or 55A, Elementary Acting, and 11A or 11B, Interpretation, or 1, Voice and Diction; or 81, Survey of Radio | 12 |
| *Upper Division* | |
| Upper division Speech Arts electives selected with the approval of departmental representative | 9 |

# CURRICULA LEADING TO CREDENTIALS IN ADMINISTRATION AND SUPERVISION

## CURRICULA LEADING TO CREDENTIALS IN ELEMENTARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the general requirements of the State of California for all degrees, the candidate shall meet the following requirements:

(a) Possess a valid General Elementary Credential.
(b) Present written evidence of two years of successful teaching experience in the elementary schools.
(c) Complete 30 semester units for the Administration Credential (24 units for the Supervision Credential) of upper division or graduate work in addition to the holding of the General Elementary Credential. These units shall include specific courses designed by the State Department of Education and the college.
(d) Maintain a grade point average of 1.75 in work taken subsequent to receipt of the General Elementary Credential.
(e) Complete a minimum of 15 units of work in residence at San Diego State College.
(f) Make formal application to the Director of Elementary Education.
(g) Earn the recommendation of the Department of Education.

Students applying for the Elementary Administration or Supervision Credentials should register with the office of the Dean of Education and confer with the Director of Elementary Education concerning the courses which may be offered in satisfaction of the requirements. Outlines of pattern requirements for either the Elementary Supervision or Administration Credentials may be obtained by writing the Director of Elementary Education.

## SPECIAL SUBJECT SUPERVISION CREDENTIAL

This credential is available for persons who wish to supervise in a special subject area. Those desiring this credential should see the Dean of Education.

## CURRICULA LEADING TO CREDENTIALS IN SECONDARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the general requirements of the State of California for all degrees, the candidate shall meet the following requirements:

(a) Possess a valid General Secondary Credential.
(b) Present written evidence of two years of successful teaching experience.
(c) Complete 18 semester units for the Administration Credential (15 semester units for the Supervision Credential) of upper division or graduate work after holding a valid General Secondary Credential. These units must include a specific pattern of courses designed by the State Department of Education and the college.
(d) Maintain a grade point average of 1.75 on units under (c).
(e) Complete a minimum of 12 units of work in residence at San Diego State College after holding the General Secondary Credential.
(f) Make formal application to the Director of Secondary Education.
(g) Earn the recommendation of the Department of Education.

Students applying for the Secondary Administration or Supervision Credentials should register with the office of the Dean of Education and confer with the Director of Secondary Education concerning the courses which may be offered in satisfaction of the requirements. Outlines of pattern requirements for either the Secondary Supervision or Administration Credentials may be obtained by writing the Director of Secondary Education.

# THE BACHELOR OF EDUCATION DEGREE AND THE GENERAL ELEMENTARY CREDENTIAL

## ELIGIBILITY FOR CANDIDACY

Teachers holding the Provisional General Elementary School Credential are eligible for candidacy for the Bachelor of Education Degree. The purpose of this degree is to increase the professional competence of teachers who do not hold a bachelor's degree. The educational program of each applicant shall be determined on the basis of his previous preparation and of the services he is to render. In the period of professional preparation the applicant shall be guided into those learning experiences designed to meet his cultural and professional needs.

## MINIMUM REQUIREMENTS

An applicant for the General Elementary Credential and the Bachelor of Education Degree shall comply with the procedures for application and with the requirements for personal qualifications and general training and shall have completed a program including the following minimum requirements:

a. A four-year college course of 120 semester units, or the equivalent.

b. Eighteen semester units, or the equivalent, of professional work in education, constituting an organized program designed to prepare candidates in the following areas:

  (1) The evolution of educational thought and practice as to the function of the school in a democratic society, with emphasis on the elementary school.

  (2) The nature of individual growth and development; the psychological aspects of learning; child study, with emphasis on directed observation of children; mental hygiene and personality development; parent education; guidance practices.

  (3) The selection and arrangement of learning experiences, instructional materials, learning methods and appraisal techniques related to all statutory requirements for teaching, including reading, writing, spelling, language study, arithmetic, geography, history of the United States and of California, civics including the Constitution of the United States, music, art, physical education, healthful living, morals and manners, safety education, and fire prevention.

  (4) The use of audio-visual aids in instruction.

c. Directed teaching in the elementary school, eight semester units, or the equivalent, under the supervision of superior teachers in actual classroom situations of the elementary school level.

d. Sixty-one semester units or the equivalent in basic subject fields, distributed approximately as follows:

  (1) *Social Studies.* Twelve semester units, or the equivalent, with emphasis upon current economic, political, and social problems and world history and geography, sociology and anthropology. The legal requirement in United States Constitution and American history, institutions, and ideals shall be included in the social studies program.

  (2) *Science.* Twelve semester units, or the equivalent, in the fields of physical and biological science, with emphasis upon the study and use of the environment.

(3) *English*, including speech. Twelve semester units, or the equivalent, including oral and written expression, world literature, children's literature, dramatics, detection and correction of speech defects, and the use of books and libraries.

(4) *Mathematics.* Three semester units, or the equivalent, including subject matter and techniques essential in the teaching of mathematics in the elementary school.

(5) *Health and Hygiene.* Three semester units, or the equivalent, including personal hygiene, subject matter and techniques essential in health education to elementary school pupils.

(6) *Physical Education.* Three semester units, or the equivalent, including subject matter and techniques essential in the teaching of physical education to elementary school pupils.

(7) *Music.* Eight semester units, or the equivalent, including content and techniques appropriate for the elementary school.

(8) *Art.* Eight semester units, or the equivalent, in graphic art and industrial arts applicable to learning experiences appropriate for elementary school children.

e. The remaining units necessary to complete the requirements for the Bachelor of Education degree shall be distributed among those offerings of the institution that best serve the cultural and professional needs of the candidate.

## EVALUATION OF TEACHING EXPERIENCE AND SUBJECT MATTER FIELDS

a. A candidate with two or more years' teaching experience may be awarded a maximum of 8 semester units of credit, or the equivalent, in directed teaching provided he demonstrates satisfactory skill to a representative of the institution under whose direction he is completing his degree program, or provided other conditions set by the institution to insure classroom skill are met. This credit shall not be applied until the candidate has completed at least 112 semester units, or the equivalent, of his program.

b. Credit toward the B. Ed. degree may be secured by passing comprehensive examinations in the fields of study mentioned in paragraphs (b) and (d) above.

## INSTITUTION AND RESIDENCE REQUIREMENTS

a. A minimum of 30 semester units, or the equivalent, must be secured from the college conferring the degree.

b. A least 12 semester units, or the equivalent, must be earned in campus residence course work at the college conferring the degree and must be secured after completion of at least 90 semester units, or the equivalent.

c. A maximum of 30 units may be secured by examination.

The Bachelor of Science Degree will be offered in certain curricula to be designated at a later date. Students interested in this degree should obtain supplementary information from the Office of the Registrar.

# THE BACHELOR OF SCIENCE DEGREE

The Bachelor of Science Degree will be offered in certain curricula to be designated at a later date. Students interested in this degree should obtain supplementary information from the Office of the Registrar.

# THE MASTER OF ARTS DEGREE

## NATURE OF THE DEGREE

The Master of Arts degree is offered at San Diego State College for members of the teaching profession. Students may elect to concentrate in a subject matter major or in education. The following areas of concentration are now available:

*Teaching Majors:* Chemistry, commerce, English, foreign language, health and physical education, history, life science (botany and zoology), physics, psychology, and social science.

*Education:* Elementary, secondary, administration and supervision, and student personnel services.

*School Psychologist:* Psychology or educational psychology.

## REQUIREMENTS

Students who meet the following requirements are eligible for graduation with the master's degree:

A. 30 units of approved graduate work beyond the bachelor's degree. To earn both the general secondary credential and the master's degree usually requires 36 units of graduate work, which may include six units in directed teaching. Additional units will usually be required if the student has earned less than 12 units in education courses as an undergraduate student.

B. 24 units in residence. Courses taken prior to summer session 1946 at San Diego State College, or any other California State College, may **NOT** be used as graduate work.

C. Grade point average of 2.0 in all work taken after the bachelor's degree. (Grade of A, 3 grade points; B, 2 grade points; C, 1 grade point; D, 0 grade points).

D. Completion of the requirements for an approved California teaching credential, or the holding of one, such as the general elementary, general secondary, junior high, and special secondary school credentials.

E. Satisfactory completion of the candidate's degree program as approved by the Graduate Committee.

## ADMISSION TO GRADUATE STUDY

A. Graduate Status may be granted to applicants who have regularly applied and have filed official transcripts as evidence of their possession of a bachelor's degree from an accredited institution.

B. Provisional admission to graduate study, Graduate Special Status, may be granted to one who holds a bachelor's degree from an unaccredited college. Such a student will be eligible for Graduate Status when he has earned a grade point average of 1.5 on 12 or more units of approved upper division work at this college and has cleared all undergraduate deficiencies. Special Status is given also to those students who have not completed the regular admission procedures.

## ADMISSION TO CANDIDACY

A candidate for the master's degree must qualify as follows:

A. Apply for admission to candidacy at the Office of the Dean of Education. Students should apply during the first graduate term in attendance. Admission cannot be completed, however, until the student has earned 12 units at San Diego State College, or six units if his undergraduate grade point average was 1.5 or better.

B. Earn and maintain a grade point average of 2.0 on all graduate work.

C. Satisfactorily complete the following: (1) scholastic aptitude test for graduates, (2) scholastic achievement test, (3) personal interviews and speech test, and (4) health and physical examination.

D. Secure adviser's approval of: (1) a complete program of study for the degree, and (2) a master's project or thesis.

## GENERAL REGULATIONS

A. Extension and correspondence courses are not acceptable toward the degree.

B. Maximum study load: Summer session, one unit per week of attendance; fall or spring, 15 units per semester of full-time attendance. If employed full time, five units of courses numbered 100-199 or 3 units of courses numbered 200-298.

C. All candidates shall complete two units in Education 290 and one additional unit in a course in bibliography (290) in the major department.

D. Each applicant shall complete a project or thesis for three units of credit.

E. The minimum requirement for concentration in a major shall be four units of courses numbered 200-298; six additional units in the major or an approved related field, selected from upper division or graduate courses; a project or thesis; and one unit in bibliography.

F. 12 units of work must be earned after admission to candidacy.

G. 10 units must be in courses numbered 200-299.

H. The examination on the thesis will consist of two conferences between the student and his Thesis Committee; one for planning, which is to be held immediately after the appointment of the committee, and one for evaluation at the time of completing the first draft of the thesis.

# PREPROFESSIONAL AND VOCATIONAL CURRICULA

Preprofessional and vocational curricula, ranging in length from two to four years of collegiate work, are offered. Curricular outlines of preprofessional study, which are presented on the following pages, meet the typical requirements for admission to professional schools. Students expecting to complete their professional training at other institutions should modify the suggested outlines of study to meet the requirements of the professional schools of their choice. Curricular outlines for complete training leading to vocations are also presented on the following pages.

Curricular outlines are presented for agriculture, commerce, dentistry, education, engineering, home arts, inter-American relations, journalism, law, life science occupations, medicine, nursing, optometry, pharmacy, recreation, and veterinary science. Students desiring to modify these curricular outlines in terms of liberal arts majors should consult the advisers in the respective curricula.

## PRE-AGRICULTURAL CURRICULA

The high school program should include the following subjects: Elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit; foreign language, 3 units in one language.

Students should ascertain the lower division requirements of the agricultural college they expect to enter.

### CURRICULUM IN PLANT SCIENCE

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| P.E. (activity courses) | ½ | ½ |
| Health Ed. 21, Principles | 2 | – |
| Chem. 1A-1B, General | 5 | 5 |
| Botany 2A-2B, General | 4 | 4 |
| Physics 2A-2B, General | 3 | 3 |
| English 1, Composition | – | 3 |
| Electives | 2 | 1 |
| | 16½ | 16½ |
| **Sophomore Year** | | |
| P.E. (activity courses) | ½ | ½ |
| Econ. 1A-1B, Principles | 3 | 3 |
| English 2, Literature | – | 3 |
| Chem. 101, Elem. Organic, and 102, Laboratory | 4 | 3 |
| Geology 1A, Physical, or 2A, General | 3 | – |
| Bact. 1, General | – | 4 |
| Zoology 1A, General | 4 | – |
| Psychology 1, General | – | 3 |
| Elective | 2 | – |
| | 16½ | 16½ |

### CURRICULUM IN ANIMAL SCIENCE

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| P.E. (activity courses) | ½ | ½ |
| Chem. 1A-1B, General | 5 | 5 |
| Zoology 1A-1B, General | 4 | 4 |
| Physics 2A-2B, General | 3 | 3 |
| English 1, Comp. and 2, Lit. | 3 | 3 |
| | 15½ | 15½ |
| **Sophomore Year** | | |
| P.E. (activity courses) | ½ | ½ |
| Health Ed. 21, Principles | 2 | – |
| Psychology 1, General | 3 | – |
| Econ. 1A-1B, Principles | 3 | 3 |
| Bact. 1, General | – | 4 |
| Botany 1, Introduction | 4 | – |
| Chem. 101, Intro. Organic, and 102, Laboratory | 4 | 3 |
| Zoo. 100, Embryology | – | 3 |
| Zoo. 20, Human Anatomy and Physiol. or 8 Human Anatomy | – | 3 |
| | 16½ | 16½ |

## COMMERCE CURRICULUM

The first two years of the curriculum are introductory. During this period the student acquires a basis for further study and an understanding of the place that business fills in modern economic life. The choice of the major field should be made at the beginning of the junior year. The student then follows a program of studies that is designed to provide a vocational ability in at least one particular area: (A) Accounting; (B) Banking and Finance; (C) Business Administration; (D) Marketing; (E) Insurance; (F) Personnel Administration; (G) Office Management; and (H) Secretarial.

### Lower Division

| | *Units* |
|---|---|
| P.E. (activity courses) | 2 |
| Engl. 8, Bus. Engl., and 2, Lit. | 6 |
| Health Educ. 21, Principles | 2 |
| Psychology 1, General | 3 |
| Natural Science (including Geog. 1, except for Marketing field) | 9–12 |
| Hist., Pol. Sci., or Sociology | 3–6 |
| Geog. 10, Economic, except for Marketing field | 3 |

| | *Units* |
|---|---|
| Econ. 1A-1B, Principles | 6 |
| Com. 2, Math of Finance, except for Marketing, Personnel Administration, and Secretarial fields | 3 |
| Com. 14A-14B, Prin., (or 16A-16B for Secretarial field) | 6 |
| Com. 18A-18B, Com'l Law | 6 |
| Electives | 5–11 |
| | 60 |

### *Sub-fields*

Sub-fields, designated below, must include the following courses:

| | |
|---|---|
| **Marketing:** | |
| Com. 20, Consumer Problems | 3 |
| Com. 24, Merchandising | 3 |
| Com. 25, Salesmanship | 3 |
| Com. 27, Advertising Prin. | 3 |
| Art 7, Line, Color, Display | 2 |
| **Personnel Administration:** | |
| Com. 3A, Rotary Calculator | 1 |
| Com. 3B, Key-driven Calculator | 1 |
| Com. 3C, Printing Calculator | 1 |
| Com. 20, Consumer Problems | 3 |
| Psych. 11, Applied | 3 |

| | |
|---|---|
| **Office Management:** | |
| Speech Arts 2A, Fund | 3 |
| **Secretarial:** | |
| Com. A, Business Math | 1 |
| Com. 1A-1B, Typewriting | 6 |
| Com. 5A-5B, Shorthand | 10 |

(Students knowing typewriting or shorthand must take placement examinations in these subjects before enrolling in 1A-1B or 5A-5B. It is recommended that shorthand be taken in the junior year).

### Upper Division

| | *Units* |
|---|---|
| Minor (in addition to courses applied toward the major) | 9 |
| Major | 24–25 |

For (A) *Accounting;* (B) *Banking and Finance;* (C) *Business Administration;* (D) *Marketing;* (E) *Insurance;* (F) *Personnel Administration*, the following courses must be included: Economics 111, Economic History of the United States, or 170, Government and Business, or Commerce 123, Marketing Principles; Economics 140, Statistical Methods; Commerce 121, Business Administration; and 15 units selected from one of the following groups:

A. *Accounting:* Com. 118A-118B, 160A-160B, 161A-161B, 162, 164A-164B, 165A-165B, 166.

B. *Banking and Finance:* Com. 133, 134, 137, 154; Econ. 131, 135, 142.

C. *Business Administration:* Com. 118A-118B, 123, 125, 126, 127A, 133, 134, 137, 153, 154, 184; Econ. 128, 135, 142, 150, 166, 170.

D. *Marketing:* Com. 120, 123, 124, 137, 153, 154, 184, 185, 186, 187A-187B, 188, 189, 196; Home Econ. 160A-160B.

E. *Insurance:* Com. 118A-118B, 125, 126, 127A-127B, 128A-128B, 128C-128D, 128E-128F, 133, 134; Econ. 133. Recommended: Econ. 170; Soc. 50, 51, 153.

F. *Personnel Administration:* Com. 103A, 121, 153, 154; Econ. 150, 151, 154, 185; Psych. 105A, 121, 145, 152.

For G. *Office Management:* Major: 24 units to include the following courses: Com. 103A, 105A-105B, 108, 121, 153, 154, 161A; plus nine units of directed electives selected from: Com. 113A-113B, 137, 162; Econ. 135, 140, 142, 150, 170; Psych. 121.

For H. *Secretarial:* Major: 24 units to include the following courses: Com. 103A, 105A-105B, 108, 113A-113B, 153; plus nine units of directed electives selected from: Com. 121, 123, 164A-164B, 186, 188; Econ. 111, 135, 142, 150, 170, with approval of the departmental representative.

| | |
|---|---|
| Electives (to include minimum 40 upper division unit requirement) | 17–27 |
| | 60 |

## PRE-DENTAL CURRICULUM

Candidates for a degree in dentistry should ascertain the entrance requirements of the dental college to which they expect to transfer and should make whatever changes in the following typical requirements that may seem desirable in satisfying the requirements of the specific dental college.

The high school program should include the following subjects: Elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; foreign language, 3 units in one language; mechanical drawing, 1 unit.

### Lower Division

| Freshman Year | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| P. E. (activity courses) | ½ | ½ |
| Health Ed. 21, Principles | 2 | – |
| Chem. 1A-1B, General | 5 | 5 |
| Phys. 2A-2B, General | 3 | 3 |
| Phys. 3A-3B, Physical Meas. | 1 | 1 |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Psych. 1, General | – | 3 |
| Elective | 0–2 | 0–1 |
| | 16½ | 16½ |

| Sophomore Year | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| P. E. (activity courses) | ½ | ½ |
| Chem. 5, Quant. Anal. | 3 | – |
| Zoo. 1A-1B, General | 4 | 4 |
| Math. C, Int. Alg., and D, Trig. | 3 | 3 |
| Social Science (year course selected from Anth. 1A-1B, General; Econ. 1A-1B, Principles; History 4A-4B, Modern Europe or 8A-8B, the Americas, or 17A-17B, Amer. Civilization; Pol. Sci. 1A-1B, Intro. to Government | 3 | 3 |
| Electives (a course in public speaking is recommended) | 3 | 6 |
| | 16½ | 16½ |

### Upper Division

The following courses are suggested for a third year in preparation for dentistry for those who fail to receive an acceptance from a dental college after completing the prescribed 60 units.

### Junior Year

| | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| Chem. 101, Intro. Organic, and 102, Lab. | 4 | 3 |
| Zoo. 106, Comp. Anat. of Vertebrates | 4 | – |
| Zoo. 100, Embryology | – | 4 |

| | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| Art 119 A, Ceramics (see prerequisite) | 2 | – |
| Psych. 11, Applied | – | 3 |
| Additional Year Course in Soc. Sci. | 3 | 3 |
| Electives | 3 | 3 |
| | 16 | 16 |

The curriculum for Dental Hygiene is essentially the same as the above for pre-dentistry.

# ENGINEERING CURRICULA

The engineering program is designed to give a student a sound training in the fundamentals of engineering with a minimum of specialization, and at the same time provide the broad training and experiences which constitute a liberal education. The program leads to the degree of Bachelor of Science in Engineering.

Students graduating in engineering will find employment in various functions of their chosen field of specialization. For example, a student who has selected the mechanical engineering option may find employment in the operation of a steam plant, or in the application and sales of construction equipment.

The program is intended to provide the essential training in those functions which are within the scope of a four year program. These, specifically, are the production, operation, maintenance, serivce, sales, and management functions of engineering. Curricula and individual courses are designed to emphasize these functions. Students who desire training for work in such fields as research and development should plan to complete their education at the University.

## FIELDS OF SPECIALIZATION

In the freshman and sophomore years all students are expected to take the courses listed below. In the junior and senior years optional programs are available which provide limited specialization in aeronautical, chemical, civil, electrical, electronic and mechanical engineering, and in engineering economics. Normally, students are expected to elect one of these basic options. In certain cases equivalent programs may be worked out which will better suit the needs of an individual student.

## MINOR FIELD

Students majoring in engineering must elect a minor in one of the following fields: Chemistry, economics, mathematics, or physics.

## HIGH SCHOOL PREPARATION

The high school program should include the following subjects: Elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; solid geometry, ½ unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit.

### Lower Division

Courses must be included to satisfy all requirements for the A. B. degree pending final approval for the requirements of the B. S. degree. See section entitled: Lower Division Requirements for all Curricula.

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| P.E. (Activity courses) | ½ | ½ |
| Math. 3A, Anal. Geom. | 3 | – |
| Math. 3B, 1st Course Calculus | – | 3 |
| Phys. 4A, Mechanics | – | 4 |
| Chem. 1A-1B, General | 5 | 5 |
| Engl. 1, Freshman Composition | 3 | – |
| H.Ed. 21, Principles | 2 | – |
| Psych. 1, General | 3 | – |
| Electives | – | 3 |
| | 16½ | 15½ |

| | *Units* | |
|---|---|---|
| **Sophomore Year** | *1st Sem.* | *2d Sem.* |
| P.E. (Activity courses) | ½ | ½ |
| Math. 4A, 2d Course Calculus | 3 | – |
| Math. 4B, 3d Course Calculus | – | 3 |
| Phys. 4B, Electricity | 4 | – |
| Phys. 4C, Heat, Sound, Light | – | 4 |
| Econ. 1A-1B, Principles | 3 | 3 |
| Engr. 21, Descriptive | 3 | – |
| Engr. 23, Materials | – | 2 |
| *Electives (see below) | 3 | 4 |
| | 16½ | 16½ |

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* One of the following groups of courses is required, dependent upon the field of specialization desired in the upper division:

| | *Units* | |
|---|---|---|
| *For Civil Engineering* | *1st Sem.* | *2d Sem.* |
| Engr. 1A-1B, Plane Surveying | 3 | 3 |
| *For Mechanical, Electrical and Aeronautical Engineering* | | |
| Engr. 1A, Plane Surveying | 3 | – |
| Engr. 22, Machine Drawing | – | 3 |

| | *Units* | |
|---|---|---|
| *For Chemical Engineering* | *1st Sem.* | *2d Sem.* |
| Chem. 5, Quantitative Analysis | 3 | – |
| Chem. 101, Organic Chemistry | – | 4 |
| *For Engineering Economics* | | |
| Com. 14A-14B, Accounting | 3 | 3 |

Students should, if possible, complete all of the college lower division requirements in the sophomore year. Any not completed must be completed in the junior year.

## Upper Division

All upper division requirements for the A. B. degree must be met pending final approval for the requirements of the B. S. degree. These include:

Examination in American History and United States Constitution.

Completion of a minimum of 24 upper division units for the major.

Completion of nine upper division units for a minor in one of the following fields: Chemistry, economics, mathematics, or physics.

The courses required for the engineering major include a core group plus those required for each field of specialization. These are indicated below.

The choice of field of specialization and the choice of electives must be approved by the engineering department. Students normally will submit master plans for their upper division program, for departmental approval, at the beginning of the junior year. Any subsequent deviation from this plan must be approved by the department.

Required of all engineering students:

| Junior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Engr. 102A-102B, Anal. Mechanics | 3 | 3 |
| Engr. 100A-100B, Elec. Engineering | 3 | 3 |
| Engr. 140, Strength of Materials | – | 3 |

| Senior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Engr. 128, Engr. Thermodynamics | 3 | – |
| Engr. 105, Hydraulics | – | 3 |
| Engr. 199, Senior Report | – | 2 |

Additional requirements for various fields of specialization:

### Aeronautical Engineering

| Junior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Engr. 122, Machine Design | 3 | – |
| Engr. 141, Materials Engr. Lab. | – | 2 |
| Math. 118A or 119 or 124 | 3 | – |
| Engr. 101A-101B, Elec. Engr. Lab. | 2 | 2 |
| Electives | 2 | 3 |
| | 16 | 16 |

| Senior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Engr. 156, Aerodynamics | – | 3 |
| Engr. 142, Stress Analysis | 3 | – |
| Engr. 129, Heat, Power Lab. | 2 | – |
| Econ. 131 or 150 or 170 | 3 | 3 |
| Electives | 5 | 5 |
| | 16 | 16 |

### Chemical Engineering

| Junior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Chem. 102, Organic Chem. Lab. | – | 3 |
| Engr. 141, Materials Engr. Lab. | – | 2 |
| Math. 118A or 119 or 124 | 3 | – |
| Econ. 131 or 150 or 170 | 3 | – |
| Electives | 3 | 2 |
| | 15 | 16 |

| Senior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Chem. 110A-110B, Physical Chem. | 3 | 3 |
| Chem. 144A-144B, Chem. Engr. | 3 | 3 |
| Engr. 106, Hydraulics Lab. | – | 2 |
| Engr. 129, Heat, Power Lab. | 2 | – |
| Econ. 131 or 150 or 170 | – | 3 |
| Electives | 5 | – |
| | 16 | 16 |

## Civil Engineering

| | Units | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Engr. 130, Route, Constr., Survey | 3 | – |
| Engr. 131, Adv. Surveying | – | 3 |
| Engr. 141, Materials of Engr. Lab. | – | 2 |
| Math. 118A or 119 or 124 | 3 | – |
| Astr. 3, Surveyor's Astron. | 3 | – |
| Electives | – | 2 |
| | 15 | 16 |

| | Units | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Engr. 106, Hydraulics Lab. | – | 2 |
| Econ. 131 or 150 or 170 | 3 | 3 |
| Electives | 9 | 6 |
| | 15 | 16 |

## Electrical Engineering

| | Units | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Engr. 101A-101B, Elec. Engr. Lab. | 2 | 2 |
| Engr. 141, Materials Engr. Lab. | – | 2 |
| Math. 118A or 119 or 124 | 3 | – |
| Econ. 131 or 150 or 170 | 3 | – |
| Electives | 2 | 3 |
| | 16 | 16 |

| | Units | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Phys. 107, Elect. Measurements | – | 2 |
| Phys. 102, Electronics | 3 | – |
| Engr. 129, Heat, Power Lab. | 2 | – |
| Econ. 131 or 150 or 170 | – | 3 |
| Electives | 8 | 6 |
| | 16 | 16 |

## Mechanical Engineering

| | Units | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Engr. 101A-101B, Elec. Engr. Lab. | 2 | 2 |
| Engr. 141, Materials of Engr. Lab. | – | 2 |
| Math. 118A or 119 or 124 | 3 | – |
| Econ. 131 or 150 or 170 | 3 | 3 |
| Electives | 2 | – |
| | 16 | 16 |

| | Units | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Engr. 122, Machine Design | 3 | – |
| Engr. 129, Heat, Power Lab. | 2 | – |
| Engr. 106, Hydraulics Lab. | – | 2 |
| Engr. 145, Internal Combust. Engr. | – | 3 |
| Electives | 8 | 6 |
| | 16 | 16 |

## Engineering Economics

| | Units | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Com. 121, Business Admin. | – | 3 |
| Econ. 133, Corp. Finance | 3 | – |
| Com. 18A, Commercial Law | 3 | – |
| Econ. 140, Statistics | – | 3 |
| * Electives | 3 | – |
| | 15 | 15 |

| | Units | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Econ. 170, Gov't and Business | 3 | – |
| Econ. 150, Labor Problems | 3 | – |
| Econ. 131, Public Finance | – | 3 |
| * Electives | 6 | 8 |
| | 15 | 16 |

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* Electives must include at least one of the following engineering laboratory courses: 101A, 101B, 106, 129, 141.

### Electronics Engineering

| | *Units* | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Phys. 102, Basic Electronics | 3 | – |
| Engr. 104 or Phys. 104, Commun. | – | 3 |
| Phys. 122, Electronics Lab. | 2 | – |
| Math. 118A or 119 or 124 | – | 3 |
| Econ. 131 or 150 170 | 3 | – |
| Engr. 101A, Elect. Engr. Lab. | 2 | – |
| | 16 | 15 |

| | *Units* | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Engr. 124 or Phys. 124 Radio Meas. | – | 2 |
| Engr. 150, Industrial Electron. | 2 | – |
| Phys. 152, Advanced Electronics | – | 2 |
| Phys. 107, Elect. Measurements | – | 2 |
| Econ. 131 or 150 or 170 | 3 | – |
| Engr. 101B, Elect. Engr. Lab. | – | 2 |
| Electives | 8 | 3 |
| | 16 | 16 |

## PRE-FORESTRY CURRICULUM

Students desiring to enter professional training in forestry should ascertain the entrance requirements of the college to which they expect to transfer and should make whatever changes in the following suggested pre-forestry courses that may seem desirable in satisfying the requirements of that college.

The high school program should include the following subjects: English, 4 units; Elementary Algebra and Plane Geometry, 2 units; Intermediate Algebra, 1 unit; Solid Geometry, ½ unit; Trigonometry, ½ unit; Physics, 1 unit; Chemistry, 1 unit; History, 1 unit; Geometrical Drawing, 1 unit; foreign language, 2 to 4 units, preferably German or French.

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| P.E. (activity courses) | ½ | ½ |
| Chem. 1A-1B, General | 5 | 5 |
| Botany 2A-2B, General | 4 | 4 |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Math. 3A, Plane Anal. Geom. | 3 | – |
| Math. 3B, first course in Calculus | – | 3 |
| | 15½ | 15½ |

| | *Units* | |
|---|---|---|
| **Sophomore Year** | *1st Sem.* | *2d Sem.* |
| P.E. (activity courses) | ½ | ½ |
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Phys. Meas. | 1 | 1 |
| Engr. 1A-1B, Plane Surveying | 3 | 3 |
| Econ. 1A-1B, Principles | 3 | 3 |
| Geology 2A, General | 2 | – |
| Health Ed. 21, Principles | – | 2 |
| Psychology 1, General | 3 | – |
| Chem. 101, Intro. Organic | – | 4 |
| | 16½ | 16½ |

## HOME ARTS CURRICULUM

The Home Arts curriculum is designed to meet the needs of those students who wish to apply their knowledge to the various problems of home living. This curriculum is based on the *general major* in arts and sciences with a field of concentration in Home Economics combined with two other fields to be selected by the student in consultation with the Home Arts adviser and the Dean of Arts and Sciences. (For specific information on the *general major*, refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.) By appropriate selection of courses, the student may prepare for the fields of journalism, radio, community recreation, home service in industry, merchandising, and several phases of social work.

The outline of courses listed below is suggested as a plan for the *general major* with Home Economics as a field of concentration.

### Lower Division

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| P.E. (activity courses) | ½ | ½ |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Psychology 1, General | 3 | – |
| Health Educ. 21, Principles | – | 2 |
| Chem. 2A-2B, General | 3 | 3 |
| Home Econ. 1, Home and Fam. Life | – | 3 |
| Electives (see lower division requirements) | 6 | 4 |
| | 15½ | 15½ |

| | *Units* | |
|---|---|---|
| **Sophomore Year** | *1st Sem.* | *2d Sem.* |
| P.E. (activity courses) | ½ | ½ |
| Home Econ. 61A-61B, Nutrition | – | 3 |
| Home Econ. 5, Food Preparation | 3 | – |
| Home Econ. 10, Clothing | – | 3 |
| Soc. 50, Contemp. Soc. Prob. | 3 | – |
| Soc. 51, Principles | – | 3 |
| Electives (complete lower division requirements) | 9 | 6 |
| | 15½ | 15½ |

Prepare for U. S. History-Constitution requirement for graduation.

Suggested electives for the first two years: Biol. 10A-10B or 1; Zoo. 20; Physics 2A-2B; Speech Arts 2A-2B; History 17A-17B; Health Educ. 90; Art 6B, 61B.

### Upper Division

Home Economics courses to satisfy the general major in home arts should be selected from the following:

| | *Units* |
|---|---|
| Home Econ. 101, Clothing Selection | 3 |
| Home Econ. 105, Family Meals | 3 |
| Home Econ. 135, Marriage and Family | 3 |
| Home Econ. 160A, Textiles | 2 |

| | *Units* |
|---|---|
| Home Econ. 160B, Non-Textiles | 2 |
| Home Econ. 150, Home Management | 3 |
| Home Econ. 170, Child Care | 3 |
| Home Econ. 102, Child Growth and Development | 3 |

The General Major consists of 36 upper division units representing three fields with 9 to 15 units in each field. Six units in the lower division in each field is normally required as preparation for the upper division. The two fields in addition to Home Economics should be selected in consultation with the adviser in Home Arts.

## INTER-AMERICAN RELATIONS

This curriculum, designed around the general major, provides (1) a basis for a more effective understanding of the opportunities and problems of international relations in the western hemisphere; (2) facilities for a basic education and training for a business or professional career involving international relations.

Competition for opportunities in international affairs is severe. Preparation for employment as a foreign representative of an American business organization implies concentration in economics. Students pursuing this curriculum as a guide for training for the Foreign Service should include additional courses in foreign language, history, political science, geography, and economics, in order more effectively to prepare for the competitive comprehensive examinations required for appointment to the Service and for entrance to the Foreign Officers Training School at Washington, D. C.

A high school program should include three units in one foreign language, preferably Spanish.

### Lower Division

| Freshman Year | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| P. E. (activity courses) | ½ | ½ |
| Health Educ. 21, Principles | 2 | – |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Spanish | 0–3 | 0–3 |
| Natural Sci. (including Geog. 1. See lower div. requirements) | 3 | 3 |
| Hist. 8A-8B, Americas | 3 | 3 |
| Psychology 1, General | – | 3 |
| Electives | 2–5 | 1–4 |
| | 16½ | 16½ |

| Sophomore Year | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| P.E. (activity courses) | ½ | ½ |
| Natural Science | 3 | 3 |
| Econ. 1A-1B, Principles | 3 | 3 |
| Pol. Sci. 1A-1B, Intro., or 71A-71B, Am. Gov't | 3 | 3 |
| Electives (including additional Spanish if needed) | 6 | 6 |
| | 15½ | 15½ |

### Upper Division

| Junior Year | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| Econ. 195, Inter. Econ. Rel. | – | 3 |
| Pol. Sci. 150A-150B, Inter Rel. | 3 | 3 |
| Hist. 173A-173B, Expansion U. S. | 3 | 3 |
| Span. 104A-104B, Span.-Am. Lit. | 3 | 3 |
| Econ. elective | 3 | – |
| Electives | 3 | 3 |
| Exam. in U. S. Constitution | – | – |
| | 15 | 15 |

| Senior Year | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| Econ. 190, Foreign Trade | – | 3 |
| Econ. 198, Invest. and Report | 3 | – |
| Hist. 161, Mexico and Carrib. | 3 | – |
| Hist. 162, So. Am. Since Indep. | – | 3 |
| Geog. 116, Latin America | – | 3 |
| Geog. 121, North America | 3 | – |
| Electives from econ., hist., pol. sci., or geog. to complete the general major | 3 | 3 |
| Electives | 3 | 3 |
| | 15 | 15 |

## PRE-JOURNALISM CURRICULUM

Students desiring to emphasize journalism in working for the A. B. degree should take a general major with journalism as one of the three major fields of study. (For explanation of the general major, refer to: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.)

The curriculum suggested below recognizes the widely held contention that for work in the newspaper, magazine, or publishing fields more than vocational training is needed. A competent journalist must have a broad educational background, with particular emphasis on the social sciences.

For specialized journalism (such as foreign correspondence, scientific, financial, or political reporting) the student should include specialized courses. Additional social science courses are recommended as electives.

Students preparing to transfer to other colleges for degrees in journalism should ascertain entrance requirements of the prospective college, and should mold their programs accordingly.

For students undecided upon any field of specialization within journalism the following curriculum is suggested:

### Lower Division

| Freshman Year | Units<br>*1st Sem.* | <br>*2d Sem.* |
|---|---|---|
| P. E. (activity courses) | ½ | ½ |
| Health Ed. 21, Principles | 2 | – |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Psych. 1, General; 5, Principles, or 11, Applied | 3 | 3 |
| Hist. 4A-4B, Mod. Eur. or 8A-8B, Americas or 17A-17B Amer. Civil (if 17A-17B elected, must be in Soph. Yr.) | 3 | 3 |
| Natural Sci. (see lower div. requirements) | 3 | 3 |
| Journ. 92, Special Projects | 1 | 1 |
| Commerce 2A, Pers. Use Typewrit. | – | 3 |
| | 15½ | 16½ |

| Sophomore Year | Units<br>*1st Sem.* | <br>*2d Sem.* |
|---|---|---|
| P. E. (activity courses) | ½ | ½ |
| Journ. 51A, Elements | 3 | – |
| Journ. 51B, News Gathering and Reporting | – | 3 |
| For. Lang. (if not completed in high school) | 3 | 3 |
| Natural Science | 3 | 3 |
| Econ. 1A-1B, Principles; or Sociol. 50, Contemp. Soc. Prob., and 51, Principles | 3 | 3 |
| Lib. Sci. 10, Use of Library | 2 | – |
| Journ. 92, Special Projects | 1 | 1 |
| Elective | – | 2 |
| | 15½ | 15½ |

### Upper Division

On acquiring upper division status, the student should confer with his adviser to plan courses meeting specific and specialized needs and the requirements for the A. B. degree with a general major, including the U. S. Constitution and American history graduation requirements.

# LABORATORY TECHNICIAN—CLINICAL, MEDICAL, OR PUBLIC HEALTH

The license for medical technologist requires five years of experience as a clinica technician to qualify for examination for licensure. The clinical laboratory technician qualifying examination for licensure requires six months apprenticeship, while the public health bacteriologist licensure requires six months in a public health laboratory or twelve months in a clinical laboratory. The student should plan his program in consultation with his adviser.

## Lower Division

| Freshman Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Health Ed. 21, Principles | – | 2 |
| Psychology 1, General | 3 | |
| Chemistry 1A-1B, General | 5 | 5 |
| English 1, Comp., and 2, Lit. | 3 | 3 |
| Zoo. 1A, General, or Biol. 10A-10B, General | 3–4 | 0–3 |
| Social Science | – | 3 |
| Electives | – | 3 |
| | 15½ | 16½ |

| Sophomore Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| *Chem. 5, Quant. Anal. | – | 3 |
| Bacteriology 1, General | 4 | – |
| **Physics 2A, General | 3 | – |
| **Physics 3A, Phys. Meas. | 1 | – |
| **Physiology 1A, 1C, General | – | 5 |
| Foreign Lang. (if needed) | 3 | 3 |
| Social Science | 3 | 3 |
| (See U.S. Hist.-Const. requirements) | | |
| Elective | 2 | 2 |
| | 16½ | 16½ |

## Upper Division

| | Units Jr. Yr. | Units Sr. Yr. |
|---|---|---|
| *Chem. 101, Organic | 4 | – |
| *Chem. 114, 115, 116, Biochem. | 5 | 3 |
| Bact. 102, 103, Bact. and Sero. | 5 | 4 |
| *Bact. 105, Bact. Metabolism | – | 2 |
| *Bact. 106, Virology | 2 | – |
| *Zoo. 128, Parasitology | 4 | – |

| | Units Jr. Yr. | Units Sr. Yr. |
|---|---|---|
| *Zoo. 109, Hematology | 3 | – |
| Electives (to satisfy A.B. or B.S. degree requirements including major and minor. Recommended: Zoo. 100, 104, 108, 126) | 5 | 18 |
| | 28 | 27 |

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* Not required for Public Health Bacteriologist.

** Not required for Clinical Laboratory Technician nor Public Health Bacteriologist.

## PRE-LEGAL CURRICULUM

The entrance requirements of schools of law range from two years to three and four years of pre-legal work. The lower division requirements of the arts and sciences curricula should be met in full whether the pre-legal curriculum extends over a period of two, three, or four years.

The following curriculum is designed to meet the recommendations of standard American schools of law for a broad and liberal education. For the majority of pre-legal students a general major with concentration in economics, political science, and history, or a major-minor combination in these fields will constitute the most effective preparation for later professional study in law and for later activities in the field of business.

### Lower Division

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| P.E. (activity courses) | ½ | ½ |
| Health Ed. 21, Principles | – | 2 |
| Foreign Lang. (if needed) | 3 | 3 |
| Natural Science (see lower division requirements) | 3–6 | 3–6 |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Com. 14A-14B, Accounting | 3 | 3 |
| Psychology 1, General | 3 | – |
| Electives | – | 4 |
| | 15½ | 15½ |

| | *Units* | |
|---|---|---|
| **Sophomore Year** | *1st Sem.* | *2d Sem.* |
| P.E. (activity courses) | ½ | ½ |
| Natural Science (if needed to complete requirements) | 3 | 3 |
| Econ. 1A-1B, Principles | 3 | 3 |
| Philosophy (6 units selected from 1A-1B, 3A-3B, 20) | 3 | 3 |
| Pol. Sci. (6 units selected from 1A-1B, 71A-71B) | 3 | 3 |
| Electives | 3 | 3 |
| | 15½ | 15½ |

### Upper Division

In the junior and senior years the student will plan his course with the counsel of his adviser in terms of the field of law in which he plans to work, but keeping in mind the entrance examinations and other requirements for admission to schools of law. The course selected will be drawn from the preferred and recommended lists below. Optional courses, that is courses not found in the preferred and recommended lists, may be taken to satisfy the general major pattern requirement, but only with the consent of the student's pre-legal adviser. These courses are not to be considered as general electives.

The student must complete a master plan approved by the pre-legal adviser and filed with the Registrar.

*Preferred List*

Economics 133, 150, 151, 170.
History 151A-151B, 172A-172B, 175A-175B.
Philosophy 121, 129.
Political Science 139A-139B.
Psychology 145.
Sociology 173, 174.

*Recommended List*

Economics 102, 110, 111, 128, 131, 135, 142, 171, 172, 185, 190, 195.
English 106, 120, 126A-126B, 129, 131, 192.
History 111A-111B, 121A-121B, 143A-143B, 175A-175B, 179A-179B, 181A-181B.
Philosophy 101, 111A-111B, 130.
Political Science 105, 111A-111B, 120, 121, 122, 140A, 140B, 142, 143, 150A-150B, 152, 153, 154, 158A-158B, 198.
Sociology 152, 170, 174, 187.
Speech Arts 162, 191, 192.

## LIFE SCIENCE VOCATIONAL CURRICULA

Students planning to enter any of the terminal curricula listed below should include in their high school program the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units.

### Lower Division

| Freshman Year | *Units* 1st Sem. | *Units* 2d Sem. |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Engl. 1, Comp. and 2, Lit. | 3 | 3 |
| Zoo. 1A-1B, General | 4 | 4 |
| Social Science (see lower division requirements) | 3 | 3 |
| Chem. 1A-1B, General | 5 | 5 |
| | 15½ | 15½ |

| Sophomore Year | *Units* 1st Sem. | *Units* 2d Sem. |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Botany 2A-2B, General, or Botany 1 | 4 | 4 |
| Bact. 1, General | 4 | – |
| Psychology 1, General | – | 3 |
| Speech 2A, Fundamentals | 3 | – |
| Social Science (complete lower div. requirements) | 3 | 3 |
| Electives (see lower div. requirements) | 2 | 6 |
| | 16½ | 16½ |

Prepare for U. S. History-Constitution graduation requirement.

### Upper Division

Work in the upper division should be planned in consultation with the Chairman of the Division of Life Sciences. A terminal curriculum is offered leading to the following occupational fields: Entomology, fish and game, and wild life. Courses may be selected from those listed below.

### WILD LIFE, FISH AND GAME

General Entomology
Economic Entomology
Medical Entomology
Systematic Entomology
Cold Blooded Vertebrates
Parasitology
General Physiology
Ecology
Taxonomy of Plants
Microtechnique
Mammalogy
Ornithology
Economic Biology
Organic Chemistry
Statistics
Public Administration

## PRE-MEDICAL CURRICULUM

The entrance requirements of medical colleges ordinarily range from three to four years of pre-medical work. The lower division requirements of the liberal arts curricula include the general requirements of standard medical colleges and should therefore be met in full whether the curriculum extends over a period of three or of four years. All plans for pre-medical work should include an arrangement of courses to meet the requirements of the medical college which the student expects to enter.

A student who is pursuing a four-year pre-medical curriculum should major in chemistry or zoology in his junior and senior years, and must meet all upper division requirements for the A.B. degree in the liberal arts curricula.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units. Two units of Latin are recommended.

### Lower Division

| Freshman Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Health Ed. 21, Principles | 2 | – |
| Chem. 1A-1B, General | 5 | 5 |
| Psych. 1, General | – | 3 |
| Engl. 1, Comp. and 2, Lit. | 3 | 3 |
| French or German (if needed) | 3 | 3 |
| Elective | 3 | 2 |
|  | 16½ | 16½ |

| Sophomore Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Zoology 1A-1B, General | 4 | 4 |
| Chem. 5, Quantitative Anal. | 3 | – |
| Soc. Sci. | 3 | 3 |
| French or German (if needed) | 3 | 3 |
| Elective | 3 | 6 |
| Prepare for U. S. Constitution — American history, graduation requirement. |  |  |
|  | 16½ | 16½ |

### Upper Division

| Junior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Phys. 2A-2B, General | 3 | 3 |
| Phys. 3A-3B, Physical Measure | 1 | 1 |
| Chem. 101, Intro. Organic, and 102, Organic Chem. Laboratory | 4 | 3 |
| Zool. 100, Embryology | – | 4 |
| Zool. 106, Comp. Anat. of the Vertebrates | 4 | – |
| Electives | 4 | 4 |
|  | 16 | 15 |

| Senior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Upper division requirements and electives for the major in chemistry or zoology, the minor and the degree | 15 | 15 |
|  | 15 | 15 |

## PRE-NURSING CURRICULUM

A student who plans to complete a curriculum in nursing leading to a degree and a certificate in nursing in another collegiate insitution should ascertain the lower division requirements of that institution.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units; domestic science (foods), 1 unit; 2 units of Latin are recommended. See separate bulletin for Bachelor of Science Degree in Nursing Education.

| Freshman Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Health Educ. 21, Principles | – | 2 |
| Biol. A, Solutions and Dosage | 2 | – |
| Chem. 2A-2B, Fundamentals, or 1A, General | 3–5 | 0–3 |
| Home Econ. 61A-61B, Nutrition | – | 3 |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| French or German (if needed) | 3 | 3 |
| Electives | 3–6 | 2–5 |
|  | 16½ | 16½ |

| Sophomore Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Psych. 1, Gen., and 11, Applied | 3 | 3 |
| Econ. 1A-1B, Prin., or Sociol. 50, Contemp. Soc. Prob., and 51, Principles | 3 | 3 |
| Bacteriology 1, General | 4 | – |
| Physiology 1A, 1C, Human Physiology | – | 5 |
| Zoology 8, Human Anatomy | 3 | – |
| Electives | 3 | 5 |
|  | 16½ | 16½ |

## PRE-OPTOMETRY CURRICULUM

The high school program should include the following subjects: Elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; foreign language, 2 units.

The following curriculum prepares for junior standing in university schools of optometry. Student should consult the cagalog of the school to which he expects to transfer.

| Freshman Year | *Units* *1st Sem.* | *2d Sem.* |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Chemistry 1A-1B, General | 5 | 5 |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Speech Arts 2A, Fundamentals | – | 3 |
| Foreign Language (if needed) | 3 | 3 |
| Soc. Sci. (or electives) | 5 | 2 |
| | 16½ | 16½ |

| Sophomore Year | *Units* *1st Sem.* | *2d Sem.* |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Physical Measure | 1 | 1 |
| Psych. 1, General | – | 3 |
| Math. 3A, Plane Anal. Geom. | 3 | – |
| Soc. Sci. (complete requirement) | 3 | 3 |
| Physiol. 1A, 1C, Human | – | 5 |
| Health Ed. 21, Principles | 2 | – |
| Chem. 101, Intro. Organic | 4 | – |
| | 16½ | 15½ |

## PRE-PHARMACY CURRICULUM

The high school program should include the following subjects: Elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; foreign language, 2 units.

Some colleges of pharmacy offer a four-year curriculum, others a six-year curriculum of pharmacy. Students should ascertain the extent and requirements of the curriculum of the college of pharmacy they expect to enter. Colleges of pharmacy which offer the four-year curriculum normally permit not more than one year of credit in time for work completed in an institution other than a college of pharmacy. Colleges of pharmacy which offer a six-year curriculum normally permit not more than two years of credit in time for work completed in an institution other than a college of pharmacy. At San Diego State College the following pre-pharmacy curricula are offered:

| For the Four-Year Curriculum | *Units* *1st Sem.* | *2d Sem.* |
|---|---|---|
| P.E. (activity courses) | ½ | ½ |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Chemistry 1A-1B, General | 5 | 5 |
| Zoology 1A-1B, General | 4 | 4 |
| Botany 1, Introduction | 4 | – |
| Math. 3A, Plane Anal. Geom. or Math. 1, Alg. and Trig. (Prerequisite: Math. C and D or two years of high school algebra and ½ year of Trig.) | – | 3 |
| | 16½ | 15½ |

| For the Six-Year Curriculum | *Units* *1st Sem.* | *2d Sem.* |
|---|---|---|
| Freshman year same as for the four-year curriculum. | | |
| P.E. (activity courses) | ½ | ½ |
| Foreign Language (if needed) | 0–3 | 0–3 |
| Social Science (recommend including Hist. 17A-17B) | 6 | 6 |
| Physics 2A-2B, General | 3 | 3 |
| Physics 3A-3B, Phys. Meas. | 1 | 1 |
| Psychology 1, General | – | 3 |
| Health Ed. 21, Prin. | 2 | – |
| | 15½ | 15½ |

The following courses are also commonly required or recommended: Chemistry 5, Quantitative Analysis 101, Introductory Organic 102, Organic Chemistry Laboratory, Physiology 1A, Human Physiology or Zoology 20, Human Anatomy and Physiology.

## PUBLIC ADMINISTRATION CURRICULUM

The Public Administration curriculum is an adaptation of the *general major* designed for students interested in taking the junior administrative examination for entrance into local, state, or federal government service. It is also designed to prepare students for graduate work in the field of Public Administration. Students planning to enter graduate work in this field should consult with the adviser in Public Administration in planning the student program.

The outline of courses suggested below is for the purpose of guiding the student in planning the *general major*. For further information on the *general major* refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

### Lower Division

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| P. E. (activity course) | ½ | ½ |
| Health Educ. 21, Prin. | – | 2 |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Psych. 1, Gen., and 5, Prin. | 3 | 3 |
| Geog. 1, Elements (Nat. Sci.) | 3 | – |
| Foreign language (if needed) | 3 | 3 |
| Electives (see lower div. requirements) | 3 | 4 |
| | 15½ | 15½ |

| | *Units* | |
|---|---|---|
| **Sophomore Year** | *1st Sem.* | *2d Sem.* |
| P. E. (activity courses) | ½ | ½ |
| Pol. Sci. 71A-71B, Am. Gov't | 3 | 3 |
| Econ. 1A-1B, Principles | 3 | 3 |
| Hist. 17A-17B, Am. Civilization | 3 | 3 |
| Electives (to include Math C, or equivalent, and completion of lower div. requirements) | 6 | 6 |
| | 15½ | 15½ |

### Upper Division

| | *Units* | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Pol. Sci. 140A-140B, Prin. Pub. Admin. | 3 | 3 |
| Econ. 131, Pub. Finance | – | 3 |
| Econ. 140, Statistics | 3 | – |
| Soc. Sci. (Upper div. courses to apply toward the third field for the general major, to be selected in consultation with adviser) | 3 | 3 |
| Electives | 6 | 6 |
| | 15 | 15 |

| | *Units* | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Pol. Sci. 139A-139B, Am. Const. Development | 3 | 3 |
| Pol. Sci. 198, Sp. Studies | 3 | – |
| Econ. upper div. electives selected with approval of adviser | – | 3 |
| Electives, including upper div. units to complete 40 u.d. units for grad. Selected with approval of adviser | 8–10 | 9 |
| | 15 | 15 |

## RECREATION CURRICULUM

The curriculum in recreation is arranged under the plan of the general major to provide a program to train for recreation and camp leadership, work with youth groups, and related activities. See description of the general major in section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

Consultation with an adviser in the Department of Physical Education is advised in selecting courses and fields of study for the general major.

### Lower Division

| | Units |
|---|---|
| Health Ed. 21, Principles | 2 |
| Phys. Educ. | 7½–8 |
| Activity courses: 3 for men; 6 for women, selected from the following: 2A, 3A, 3B, 4, 5, 6, 9, 11A, 13, 14, 18 | |
| Phys. Ed. 43, Prof. Act. (Men) (2) | |
| Phys. Ed. 51, First Aid (2) | |
| Phys. Ed. 53, Phys. Ed for Elementary Schools (2½) | |
| Soc. Sci. (to include Sociol. 50, Contemp. Soc. Prob., and 51, Principles | 12 |
| Psych. 1, General | 3 |
| Foreign Lang. (if two years not completed in high school) | 6 |
| Natural Sci. (Phy. Sci. 10, Photography, or Astronomy 1, Descriptive, Botany 4, Calif. Plants, Geol. 2A, General. Include laboratory science if needed) | 12 |
| Engl. 1, Comp., and 2, Lit. | 6 |
| Speech Arts 2A, Fundamentals | 3 |
| Electives | 8–8½ |
| Prepare for U. S. Constitution and American History graduation requirements. | |
| | 60 |

### Upper Division

| | Units |
|---|---|
| General Major | 36 |
| 1. Sociology. 9–15 units selected from: | |
| 173, Criminology and Penology (3) | |
| *174, Juvenile Delinquency (3) | |
| 190, Fields of Social Work (3) | |
| 110, Race Relations (3) | |
| *185, Comm. Welfare Org. (3) | |
| *187, Urban Sociology (3) | |
| 2. Physical Education. 9–15 units selected from: | |
| 145, Prof. Act. (men) or 156A-156B (women) (2) | |
| 146, Prof. Act. (men) or 161 (women) (2) | |
| *165, Community Recreation (3) | |
| *170A-170B, Recreational Leadership (4) | |
| *183A-183B, Field Work in Recreation (3–6) | |
| 3. Select a third field for the general major from the following: Speech Arts, psychology, art, music, education, biological science, after consultation with adviser. (9–15) | |
| Psych. 106 or Educ. 102B-102C | 3–6 |
| Psych. 145 | 3 |
| Educ. 174, Audio-Visual-Radio Educ. | 2 |
| Electives | 13–16 |
| | 60 |

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* These courses are required.

## PRE-SOCIAL WORK CURRICULUM

The professional curriculum in social service prepares for admission to graduate work in recognized American schools of social work. This curriculum should be pursued by those who plan careers in federal, state and local welfare work; social work in public schools including preparation for a teaching credential; family and children's private case work agencies; social settlement work; county probation work; child welfare agencies; statistical and investigational work in private and public agencies; work in public institutions for the defective and delinquent; medical social service and psychiatric social work in hospitals and clinics; executive positions in social work; and social work in numerous other organizations.

The lower division requirements of the arts and sciences curricula include the general requirements of recognized professional schools of social work and should therefore ordinarily be met in full. The outline of courses below meets the requirements for the general major. For description of the general major, refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

The following subjects should be completed in high school: elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language, 3 units in one language.

### Lower Division

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| P. E. (activity courses) | ½ | ½ |
| Engl. 1, Comp., and 2, Lit. | 3 | 3 |
| Biol. 10A-10B, General | 3 | 3 |
| Foreign Lang. (if needed) | 3 | 3 |
| Psych. 1, Gen., and 11, Applied | 3 | 3 |
| Electives (include natural science requirements. Recommended: Speech 2A-2B, Fund.) | 3 | 3 |
| | 15½ | 15½ |

| | *Units* | |
|---|---|---|
| **Sophomore Year** | *1st Sem.* | *2d Sem.* |
| P. E. (activity course) | ½ | ½ |
| Econ. 1A-1B, Principal | 3 | 3 |
| Soc. 50, Contemp. Soc. Prob. | 3 | – |
| Soc. 51, Principles | – | 3 |
| Pol. Sci. 1A-1B, Intro., or 71A-71B, Am. Govt. | 3 | 3 |
| Health Educ. 21, Principles | 2 | – |
| Electives (include natural science, if needed. Recommended: anthropology) | 4 | 6 |
| | 15½ | 15½ |

Prepare for U. S. History-Constitution graduation requirement.

### Upper Division

| | | *Units* |
|---|---|---|
| Soc. 103, Elem. Soc. Statistics | | 3 |
| Soc. 187, Urban Sociology | | 3 |
| Soc. 190, Fields of Soc. Work | | 3 |
| Soc. elective | | 3 |
| Econ., nine units selected from: | | 9 |
| 150, Labor Problems | (3) | |
| 170, Govt. and Business | (3) | |
| 185, Soc. Insurance | (3) | |
| 195, Inter. Econ. Relations | (3) | |
| 102, Comp. Econ. Systems | (3) | |
| 131, Public Finance | (3) | |
| Psych. 145, Social Psychology | | 3 |
| Psych. 150, Abnormal Psychology | | 3 |

| | | *Units* |
|---|---|---|
| Psych. 151, Clinical Appraisal | | 3 |
| Pol. Sci., six units selected from: | | 6 |
| 140A-140B, Prin. Public Admin. | (3) | |
| or 142, State Govt. | (3) | |
| 143, Mun. and Co. Govt. | (3) | |
| Zoo. 165, Human Heredity, or 155, Genetics | (3) | |
| Upper division elective | | 4 |
| Additional electives | | 20 |
| | | 60 |

## PRE-VETERINARY CURRICULUM

Most colleges of veterinary medicine require but one year (32 units) of pre-veterinary college work. There are a few colleges which require two years and it is best to consult the bulletin of the college to which admission is desired for special requirements.

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| P. E. (activity courses) | ½ | ½ |
| Chemistry 1A-1B, General | 5 | 5 |
| Zoology 1A-1B, General | 4 | 4 |
| English 1, Comp., and 2, Lit. | 3 | 3 |
| Psychology 1, General | 3 | – |
| Health Educ. 21, Principles | – | 2 |
| Electives | 3 | 2 |
| | 16½ | 16½ |

| | *Units* | |
|---|---|---|
| **Sophomore Year** | *1st Sem.* | *2d Sem.* |
| P. E. (activity courses) | ½ | ½ |
| Physics 2A-2B, General | 3 | 3 |
| Chem. 101, Intro. Organic | 4 | – |
| Zoo. 100, Embryology | – | 4 |
| Statistics (offered in Econ., Psych., or Soc.) | 3 | – |
| Social Science | 3 | 3 |
| Electives (recommended: Math, Foreign Lang., Entomology) | 3 | 6 |
| | 16½ | 16½ |

# ANNOUNCEMENT OF COURSES

## COURSE NUMBERS

Courses numbered from 1 to 99 are lower division (freshman or sophomore) courses; those numbered 100 to 199 are upper division (junior or senior) courses; those numbered 200 to 299 are graduate courses (see section on Admission and Registration for information concerning eligibility to enroll in these courses) those numbered 300 to 399 are professional education courses to be taken at the graduate level.

## CREDIT FOR UPPER DIVISION AND GRADUATE COURSES

Freshmen are not admitted to upper division courses.

A sophomore may enroll in an upper division course for lower division credit provided he has earned an average grade of not less than 1.5 in all college work undertaken, and provided he receives the instructor's permission to enroll in the course.

A second semester sophomore may enroll in an upper division course for upper division credit without the foregoing grade limitations provided the units earned in the upper division course or courses are in excess of the 60 units required in the lower division.

A student with sophomore standing may carry upper division courses for upper division credit provided that he has the written approval of the chairman of the department and the Dean of Arts and Sciences or the Dean of Education.

Graduate credit for courses numbered 200 to 299 is limited to students with graduate status. (See section on Admission to Graduate Study.)

## UNITS

Figures in parentheses indicate the unit value of the course.

One "unit" represents 50 minutes of recitation or lecture, together with the required preparation, or three hours laboratory work each week for a semester of 18 weeks.

## SEMESTER IN WHICH COURSES ARE OFFERED

Roman numeral I indicates course is offered in Fall semester. Roman numeral II indicates course is offered in Spring semester.

Following the course title are designations of credit and the semester in which course is offered. Examples:

(3) I____________________________________Three units. Offered first semester
(3) I, II_______________Three units. Offered first semester and second semester
(3-3) Year, I
Three units each semester. Year sequence beginning in the first semester
(3-3) Year, I, II
Three units each semester. Year sequence beginning either semester

Although the college fully expects to carry out the arrangements planned in the list of courses, it reserves the right to make changes. Classes in which the enrollment does not come up to the minimum number set by the State Department of Education may not be offered or may be postponed.

## PREREQUISITIES

Prerequisites for courses are stated. A student should not enroll in a course for which he is not eligible.

Admission to all graduate courses requires graduate status and permission of the instructor.

## PROVISIONAL COURSES

Courses number 40 to 45 are open only to students who are in the provisional program. Other students (those not having provisional status) are not eligible to take these courses.

# AESTHETICS

## IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is not offered in aesthetics; however, certain courses in this field are required as part of the majors in art and in music. For specific information, refer to these departments.

A *teaching major* is not offered in aesthetics; however, certain courses in this field are required as part of the teaching major in art and in music for the general secondary and the special secondary credentials in these fields. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is not offered in aesthetics.

A *teaching minor* is not offered in aesthetics; however, certain courses in this field are required as part of the teaching minor in art for the general secondary, the general junior high school, and the special secondary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. Survey of Music** (2-2) Year, I

Correlation of music and other arts. Elements, structure, instrumental timbre of music. Folk music of various countries. Attendance required at local concerts. Previous musical background not required. No credit for music majors.

**5. Art Orientation** (2) II

An illustrated lecture course dealing with aesthetic meaning and its relation to the structure of art products. Designed to increase both understanding and appreciation of the visual world in general and of the fine arts in particular.

**50. Appreciation and History of Art** (2) I

A survey of art development in the painting, sculpture, architecture, and handicrafts from dawn of art to the Renaissance. Illustrated.

**51. Survey of Mexican Art** (2) I

A study of Mexican and Middle American Art from earliest time to present.

**52A-52B. Survey of Oriental Art** (3-3) Year, I, II

A study of the art of the great cultures of the Orient. (52A is a prerequisite for 52B.)

### Upper Division Courses

**100. Great Music** (3) Summer

A listening course designed especially for the layman and concert-goer. Masterpieces of instrumental and vocal music will be performed by means of recordings and by local musicians. A study of artistic trends and their effect upon musical composition and performance. Correlation of musical art and other arts. No prerequisites. No credit for music majors.

**102A-102B. Music History** (2-2) Year, I

The various movements in the development of music as related to the other arts. The chronological development of the art of music with particular emphasis on the larger works. Considerable attention is given to the works of modern composers. Many symphonic works are studied from the orchestral scores. Music majors are required to complete additional assignments for full credit. Prerequisite: Aesthetics 1A or 1B.

**138. Introduction to Aesthetic Appreciation** (1) I

Major forms of expression and aesthetic experience in art, music and literature, presented by an interdepartmental staff through lectures, demonstration, and panel discussions. Not open to students with credit for Comparative Literature 138.

**150. Appreciation and History of Art** (2) II

The period from the Renaissance through the modern school treated in the same manner as in Aesthetics 50.

**162. History and Philosophy of the Dance** (2) I (Offered 1951-52)

Historical background and appreciation of dance, with special emphasis upon the development of art in America. The justification for dance as an educational and creative art medium and its place in the curriculum. Not open to students with credit for Physical Education 162.

# ANTHROPOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is not offered in anthropology; however, upper division units in anthropology may be planned under the *general major* program. Students wishing to use anthropology as a field of concentration in the *general major* should include the following courses in the lower division: Anthropology 1A-1B, 2 or 3; Geography 1, 2 or Geology 1A-1B; Sociology 50, 51; recommended: Spanish or German. The following supplementary fields of study are recommended in the upper division with a view to later specialization in anthropological work: For *archaeology:* Art, geography, geology; for *physical anthropology:* Psychology, statistics, and zoology; for *museum work:* Art, education, and psychology. For further information on the *general major*, refer to the section on the Bachelor of Arts Degree.

A *teaching major* is not offered in anthropology; however, it may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of the requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in anthropology. The minor must include at least 15 units of work in anthropology, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in anthropology for the general secondary credential; however, anthropology may be used as a part of the *social science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the requirements for the teaching minor for these credentials.

**1A-1B. General Anthropology** (3-3) I

Origin and antiquity of man. Theories of human descent. Classification of races. Origin and early development of civilization.

**2. Physical Anthropology** (3) I

An introduction to the studies of primatology and anthropometry. The comparative anatomy of the monkeys and great apes, the emergence of the anthropoids, the reconstruction of early man from fossil evidence. The landmarks, measures and indices used in the metrical study of the living human body and skeletal material. Sexual differences and growth changes in the skull and skeleton. Medico-legal applications.

**3. Survey of Archaeology** (3) II

A review of the history of modern archeology and a discussion of its methods. The development of archaeological techniques in reconstructing the ancient cultures of the Mediterranean world. The problems of present day archaeology in the Near East, the Orient and the Americas. The principles and basic techniques used in the excavation of sites and the reporting of findings.

**54. Social Anthropology** (3) II

An anthropological study of social institutions in primitive and civilized societies. The evolution of family organization, religion, property right, and government traced in elementary and advanced civilization.

### Upper Division Courses

**151A. The North American Indian** (3) I
Pre-Columbian cultures of the North American Indian. The origin and migration of New World peoples. Industries, arts, crafts, social organization, religion and other phases of American Indian civilization.

**151B. Indian Civilization of Middle America** (3) II
The development of civilization in Pre-Columbian Mexico and Central America: Aztec, Mayan, and related cultures.

**152. World Ethnography** (3) I (Not offered in 1950-51)
The cultural patterns of representative aboriginal peoples. Industries, arts, social organization and supernaturalism considered with a view to environmental adjustment, historical development and functional interrelation. Ethnological theories reviewed and applied in interpreting illustrative aboriginal societies.

**153. Primitive Religion** (3) II (Not offered in 1950-51)
Beliefs and ritual of primitive man. Magic and religion. Forms of animism and polytheism. Primitive mentality and the supernatural.

**161. The California Indian** (3) Summer
A survey of native California Indian culture with stress on the Indian groups of Southern California. The industries, arts, social organization, folklore and religion will be considered as revealed through the study of living peoples and archaeological evidences.

**165. Ethnology and Race Psychology** (3) I (Not offered in 1950-51)
The biological basis of race, somatic and serologic typology, racial mentality, tests and their ethnopsychological significance, abnormality in ethnic groups. Race and culture; ethnic aspects of demography.

**172. Indian Cultures of the Southwest** (3) Summer
Indian cultures of the past and present in the Southwestern states. Arts, crafts, architecture and religion as revealed through archaeology and ethnology.

**199. Special Study** (3) I, II

## ART
### IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is offered in art. Every student who plans to major in art, whether under the liberal arts program or the teacher training program, should complete the following basic courses: Aesthetics 5 or 51, and 50, Art A-B, 6A-6B, and 14A. Under the liberal arts program the student majoring in art may choose either a group of courses in which the crafts are emphasized or a group of courses in which the graphic arts are emphasized. One of the following plans should be selected:

Emphasis on crafts: The student should add to the list of basic courses required of all art majors the following courses: Lower division: Art 6D, 7, 61B and four units of art electives; upper division: Aesthetics 150, Art 106A or B or C, 106D, 111A, 117A-117B, 119A-119B, and four units of art electives. This program points in the direction of industrial design, interior design, cabinet making, sculpture, weaving, textile design, ceramics, etc.

Emphasis on graphic arts: The student should add to the list of basic courses required of all art majors the following courses: Lower division: Art 15A, 16A, and 4 units of art electives; upper division; Aesthetics 150, Art 106A, 112A-112B, 115A-115B, 116A-116B, 117A, and 6 units of art electives. This program points in the direction of illustration, portraiture, landscape painting, mural design, poster design, production illustration, advertising design, fashion design, etc.

A *teaching major* in art is offered for the general secondary credential and the special secondary credential. Students planning to teach art in the secondary schools should add to the list of basic courses required of all art majors the following courses: Lower division: Art 61A-61B, and six units of art electives; upper division: Aesthetics 150, Art 116A, 112A, 106A, 119A, 195, and six units of art electives. Speech Arts 140A should also be completed. For further information, refer to the outlines of requirements for the special secondary and general secondary credentials.

## Minor

A *minor in arts and sciences* is offered in art. The minor must include at least 15 units of work in art, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in art for the general secondary, the general junior high school, and the special secondary credentials. Art may be offered only as a second teaching minor for the general elementary and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

## Art Appreciation, History and Orientation

For courses in appreciation, history of art, and art orientation, see aesthetics. Many students, regardless of the field in which they may be majoring, recognize the need for an intelligent approach to the subject of art and art appreciation. However, due to the erroneous popular feeling that art is a subject requiring "talent," these students may refrain from enrolling in art courses. For students who desire a better understanding of art, but who do not hope to acquire any of the art skills, the following courses are recommended.

| | *Units* |
|---|---|
| Aesthetics 5, Art Orientation | 2 |
| Aesthetics 50, History and Appreciation of Art | 2 |
| Aesthetics 51, Survey of Mexican Art | 2 |
| Aesthetics 52A-52B, Survey of Oriental Art | 6 |
| Art 8, Costume and Home-furnishing | 2 |

Other courses which require certain skills but which are not beyond the ability of the average college student are:

| | |
|---|---|
| Art 61B, Crafts | 2 |
| Art 6A, Design | 2 |
| Art A, Drawing and Composition | 2 |
| Art 94, Costume design | 2 |

## Lower Division Courses

**A. Drawing and Composition** (2) I, II

Problems involving perspective to develop ability to draw still life, furniture, exteriors, interiors, and the like. (High school equivalent may excuse the student from this course.)

**Art B. Drawing and Composition** (2) I, II

Drawing of mechanical and natural forms by the use of line and value. Emphasis on proportion and structure. Some quick sketching, gesture and contour drawing. Prerequisite: Art A.

**6A. Design** (2) I, II

Fundamentals of design and composition and theory of color. Basic course used as a prerequisite for all advanced work.

**6B. Design** (2) I, II

Original work in creative design and representation with special stress on modern tendencies. Prerequisite: Art 6A.

**6D. Design** (2) I, II

Study of the principles of design through the making of furniture. Prerequisite: 6A.

**7. Line, Color and Display** (2) I, II

The principles of line, color and arrangement applied to store and window display. Study and observation of windows, color and materials used in display. Building models and practical problems in arranging colors, textures, and forms in windows to fit different kinds of merchandise. (Students taking this course for upper division credit, Art 107, will be required to do additional work.)

**8. Costume and House Furnishings** (2) I, II

An appreciative study of modern architecture and modern house furnishings with emphasis on the spirit of gracious living and an appreciative study of the modern dress with emphasis on suitability to the figure, the personality and the occasion.

**14A. Lettering** (2) I

Fundamental art principles applied to lettering. Practice for quick, accurate lettering; original problems using letters as design. Prerequisite: Art 6A.

**14B. Posters and Commercial Art** (2) II

The application of lettering to posters, newspaper and magazine advertising, and other forms of commercial art. The study of composition combined with lettering and special study of modern tendencies in publicity. Prerequisites: Art 6A, 14A.

**15A-15B. Life Drawing** (2-2) Year, I, II

Drawing from the nude model. Prerequisite: Art A-B.

**16A-16B. Painting** (2-2) I, II

Semester I: Composition of still life in oil. Semester II: Landscape and more advanced composition in oil. Prerequisite: Art A-B.

**17A-17B. Sculpture** (2-2) I, II

Creative design in such materials as clay, wood, stone, concrete, etc. Prerequisites: Art 6A-6B.

**61A. Crafts in the Elementary Schools** (2) I, II

A foundation course which develops unification of work of the elementary grades through activities and experiences. These experiences grow out of environmental activities. They include study and working of clay, lumber and tools, textiles, and cardboard construction. Prerequisite: Art 6A.

**61B. Crafts** (2) I, II

Problems involving the application of design principles to various fields—pottery, textiles, weaving, metal work, wood-carving, and book-binding. Prerequisite: Art. 6A.

**94A-94B. Costume Design** (2-2) Year, I, II

Original designs of modern costumes suitable to the individual or to distinct types; the drawing of fashion figures; the rendering of fabrics and textures. Prerequisite: Art 6A.

**95A-95B. Interior Decoration** (See Art 195A-195B)

## Upper Division Courses

**106A-106B. Printmaking** (2-2) I, II

Study of print crafts which includes the making of linoleum blocks, wood engravings, etchings and lithographs. Prerequisites: Art A. B. 6A.

**106C. Illustration** (2) II

Same as 160A-B except that printmaking is applied to problems of book illustration. Prerequisites: Art A, B, 6A.

**106D. Advanced Furniture Design** (2) I, II

(See Art 6D) Prerequisite: Art 6D.

**107. Line, Color and Display** (2) I, II

(See course description under Art 7)

**111A-111B. Industrial Design** (2-2) Year, I, II

Design of objects for manufacture with reference to their use, materials, and in accordance with factory practices and machine techniques. Practice in the techniques of presentation, working drawings, renderings in perspective and scale models. Prerequisite: Art 6A-6B.

**112A-112B. Design and Composition** (2-2) Year, I, II

Imaginative organization of space by means of color, dark and light, perspective, and textures of various materials. Prerequisites: Art A-B, 6A-6B.

**115A-115B. Life Drawing and Painting** (2-2) I, II

Drawing and painting from nude and costume models. Prerequisite: Art A-B.

**115C-115D. Advanced Life Drawing and Painting** (2-2) Year, I, II
Painting from nude and costume models and advanced composition in oil. Portraiture. Prerequisite: Art 115A-115B.

**116A-116B. Advanced Painting** (2-2) Year, I, II
Painting in oil from still life, landscape, or models, stressing composition. Prerequisite: Art 16A or 16B.

**117A-117B. Sculpture** (2-2) Year, I, II
Creative design in such materials as clay, wood, stone, concrete, etc. Prequisites: Art 6A-6B and 17A or 17B.

**119A. Ceramics** (2) I
Building of pottery on the basic techniques of coil, slab, mold making, and slip casting. Ceramic sculpture, glazing and kiln operations: Art 6A.

**119B. Ceramics** (2) II
Study of glazes and elementary clay technology. Mold making, slip casting with application to individual creative problems. Prerequisite: Art 119A.

**166. Special Studies**
A student with the necessary grade point average may apply for work in an upper division art course and register for Art 166, Special Studies. (See Honor Group.)

**194A-194B. Costume Design** (2-2) Year, I, II
For description, see Art 94A-94B. Prerequisite: Art 6A.

**195A-195B. Interior Design** (2-2) I, II
The consideration of the house as a unit; the arrangement of garden, house, floor plan, and furniture as functional and decorative problems. Prerequisite: Art A and 6A, 195A is a prerequisite for 195B.

### Graduate Courses

**200A-200B. Special Problems** (2-2) I, II
A graduate course in which students may carry out projects in various fields of art under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply for work within a certain field after discussions with the art faculty.

**Art 199. Special Problems in Art**
Admission by permission of chairman of department.

## ASTRONOMY
### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is not offered in astronomy. Students desiring to prepare for advanced work in astronomy should include the following courses: Astronomy 1, 2, 3, 9, and 10; Mathematics 3A-3B, 4A-4B; Physics 4A-4B-4C; a reading knowledge of French and German.

A *teaching major* is offered in astronomy; however, astronomy may be used as part of the general science major for the general junior high school credential. For specific information, refer to the outline of requirements for the general science teaching major for this credential.

### Minor

A *minor in arts and sciences* is offered in astronomy. The minor must include at least 15 units of work in astronomy, nine units of which must be from courses carrying upper division credits.

A *teaching minor* is not offered in astronomy; however, astronomy may be used as part of the *general science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the requirements of the teaching minor for these credentials.

## Lower Division Courses

**1. Descriptive Astronomy** (3) I, II

A cultural course planned to develop an appreciation of astronomy with emphasis on the solar system. Attention is given to the methods by which astronomical knowledge has been gained. A six-inch refractor and an eight-inch reflecting telescope are available for observation.

**2. Modern Astronomy** (3) II

A study of the stellar system in the light of modern research, especially photographic and spectrographic. Prerequisite: Astronomy 1 or permission of the instructor.

**3. Surveyor's Course in Practical Astronomy** (3) II

The principles of spherical astronomy adapted to the needs of engineering students. Computation and observation. Two lectures and one three hour laboratory period each week. Prerequisite: Surveying 1A or permission of the instructor. Astronomy 1 and 9 desirable.

**9. Practice in Observing** (1) I, II

A course designed to supplement Astronomy 1. The course will include constellation study, use of astronomical coordinates, and descriptive observations of celestial objects with the telescope. One evening laboratory period each week Recommended: Astronomy 1 or concurrent registration in Astronomy 1.

**10. Advanced Observational Astronomy** (1) II

A continuation of Astronomy 9. More advanced problems in observing will be taken up such as the determination of azimuth by observations of Polaris, transit observations, astronomical photography, etc. One three-hour evening laboratory period each week. Prerequisite: Astronomy 9.

**12. Elementary Navigation** (3) I

A study of compass corrections, time, line of position, use of celestial coordinates, etc. A few class hours devoted to the use of tables such as H.O. 214 for the solution of astronomical triangle. One laboratory period each week. Prerequisite: Astronomy 1 or permission of the instructor.

## Upper Division Courses

**101. Principles of Astronomy** (3) I

A course designed particularly to provide background for teachers. It consists of two lectures and one laboratory period each week. Students will be required to become familiar with the prominent constellations, brighter stars in the sky, and with the general characteristics of the solar and stellar system.

**103. Astronomical Optics** (2) II

This course aims to acquaint the students with the optics and methods of testing an astronomical telescope. The course consists of one lecture and one laboratory period each week. The student is required to grind a four-inch astonomical mirror. Prerequisite: Astronomy 1 or permission of instructor.

**105. Historic Development of Astronomy** (3) I (Not offered in 1950-51)

A study of the more important problems and astronomical concepts in the light of their historical development. Particular attention is given to the biography and contributions of the more important astronomers, such as, Galileo, Kepler, Newton, Herschel, Bessel, etc.

**107. Method of Least Squares and Computing Practices** (3) I

Fundamental principles with applications in the fields of astronomy, physics, and engineering.

**110. Introduction to Study of Variable Stars** (3) II

A study will be made of the various types of variable stars, their spectra, periods, methods of observing, etc. In the laboratory the light curve of several typical variables will be observed. Two lectures and one laboratory period each week. Prerequisite: Astronomy 2. Astronomy 9 desirable.

**112. Elementary Astrophysics** (3) I

A lecture course in the application of physics to astronomy: Much of modern astronomical research is in the field of astrophysics. An occasional laboratory period will be substituted by appointment for the lecture period. Prerequisites: Astronomy 2 or college physics.

**199. Special Problems** (1 or 2) I, II

Admission by consent of instructor. Credit and hours to be arranged in each case. Open to students who have completed three units in astronomy.

## BACTERIOLOGY

### IN THE DIVISION OF LIFE SCIENCES

Major work is not offered in bacteriology. Courses in this field are recommended for students who are preparing to teach science in junior high school or life sciences in high school.

### Minor

A *minor in arts and sciences* is offered in bacteriology. Lower division requirements: Bacteriology 1, Chemistry 1A-1B. Recommended: Zoology 20 or Physiology 1A. Upper division requirements: Chemistry 101, Bacteriology 102 and 103. Recommended: Chemistry 102, 114A, 115, 116, Bacteriology 105, 106, and 199.

A *teaching minor* is not offered in bacteriology.

### Lower Division Courses

**1. General Bacteriology** (4) I, II

An introduction to bacteriology. Effects of physical and chemical agencies upon bacteria; biochemical activities of bacteria; microscopic examination and cultivation of bacteria; the bacteria of air, water, soil, milk and dairy products, other foods; industrial applications. Introduction to disease-producing bacteria. Two hours of lecture and six hours of laboratory per week. Prerequisite: Chemistry 1A or 2A.

### Upper Division Courses

**101. General Bacteriology** (4) I, II

Lectures and laboratory work of Bacteriology 1 with additional work to be prescribed by the instructor. Prerequisite: Chemistry 1A or 2A.

**102. Advanced Bacteriology** (5) I

A survey of the agents of disease and methods of host resistance. Laboratory experience in diagnosis and immunologic techniques. Three lectures and three laboratories per week. Prerequisites: Bacteriology 1 or 101, and Chemistry 101. Recommended: Biochemistry, physiology.

**103. Serology** (4) II

A survey of the principles and techniques used in serological diagnosis of disease agents. The course is planned for students interested in clinical laboratory technology. Three lectures and three laboratories per week. Prerequisites: Bacteriology 1 or 101, and Chemistry 101. Recommended: Biochemistry, physiology.

**105. Bacterial Metabolism** (2) I

A course to provide a basic knowledge of the principles by which micro-organisms derive energy to support the life processes. Prerequisites: Bacteriology 1 or 101, Chemistry 101. Recommended: Biochemistry.

**107. Virology** (2) I

A survey of viruses and Rickettsias as agents of disease. An introduction to virological techniques, and routes of infection with further consideration of concepts of epidemiology, diagnosis, pathology, host-responses and methods treatment. Prerequisite: Bacteriology 102, 103, or equivalent.

**199. Special Problems** (1 or 2) I, II

Work other than is outlined in the regular courses. Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least 15 units of work in the life sciences (including courses in bacteriology) with grades of A or B.

# BIOLOGY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is not offered in biology; however, courses in biology may be used as part of the *life science major in arts and sciences.* Refer to the description of the *life science major* in the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

A *teaching major* is not offered in biology; however, Biology 10A-10B may be used for the year course required in a biological science for the *general science major* for the general junior high school credential or the *physical science major* for the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor* is not offered in biology; however, biology may be used as part of the *general science minor* for the general junior high school and special secondary credentials. For specific information, refer to the outlines of requirements for the teaching minor for these credentials.

### Lower Division Courses

**A. Solution and Dosage** (2) I

Arithmetic review with computing of dosage, percentage of solutions, apothecaries weights. Two hours per week.

**1. Survey of Biology** (3) I, II

A survey of life science with emphasis on the biology of man in relation to modern life. Three lectures and one hour of demonstration and discussion per week. Not open to students with credit for Biology 40, 10A-10B, Zoology, 1A-1B, Botany 1 or 2A-2B.

**10A-10B. General Biology** (3-3) Year, I, II

A year course with three hours of laboratory per week. Designed for students not intending to specialize in botany or zoology. Not open to students with credit for Biology 1, 40, Zoology 1A, 1B, Botany 1, 2A or 2B. Biology 10A is prerequisite for 10B.

# BOTANY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in Arts and Sciences* is offered in botany. Lower division requirements: Botany 2A-2B, Chemistry 1A-1B or 2A-2B. Recommended: German, French or Spanish, Zoology 1A-1B, Bacteriology 1. Upper division requirements: A minimum of 24 upper division units, at least 18 units of which must be in botany and six of which may be related courses in bacteriology, chemistry, geology, zoology, selected with approval of departmental representative.

A *teaching major* is not offered in botany.

### Minor

A *minor in arts and sciences* is offered in botany. The minor must include at least 15 units of work in botany, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in botany; however, botany may be used as part of the *general science minor* for the general junior high, the special secondary, the general elementary, and the kindergarten-primary credentials or as part of the *life science minor* for the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

## Lower Division Courses

**1. Introduction to Botany (4) I, II**

Designed primarily for students who desire a general acquaintance with the fundamentals of botany. Not open to students who have credit for Botany 2A or 2B, but may be used as a prerequisite to upper division courses. Three lectures, and one laboratory per week.

**2A-2B. General Botany (4-4) I, II**

Year course covering fundamentals of structure, general behavior, morphology and relationship of plants, including an introduction to classification and distribution of seed plants. Two lectures and six hours of laboratory work per week. Botany 2A is a prerequisite for 2B.

**4. California Plants (2) II**

Classification and ecology of representative orders of wild flowers, trees, and chaparral of San Diego region, including practice in the use of keys. One lecture and three hours laboratory per week. Occasional Saturday field trips.

## Upper Division Courses

**102. Mycology (4) I**

A study of the different groups of fungi. Special attention will be given to the parasitic and economic forms, their life history, structure, and classification. Prerequisite: Botany 2B.

**107. Plant Physiology (4) II**

The activities of plants, including food manufacture, absorption, conduction, transpiration, respiration, growth and movement. Two lectures and two laboratory periods per week. Prerequisites: Biology 10A-10B or Botany 2A, and Chemistry 2A-2B or equivalent.

**112. Cultivated Trees and Shrubs (3) I**

Recognition of the common cultivated trees and shrubs of the San Diego region. Trips to local parks and private gardens. One lecture and three hours per week laboratory or field work.

**114. Plant Taxonomy (3) II**

Identification, classification and distribution of representative orders of flowering plants. One hour lecture and six hours per week of laboratory and field work. Prerequisites: Botany 2A-2B, or 4.

**126. Plant Pathology (3) II**

A practical course dealing with the principles of disease in plants, control measures, and quarantine procedures. Emphasis is placed on the determination and control measures of those pathogenic organisms which affect crops, trees and shrubs and nursery stock. Two lectures and one laboratory period per week. Prerequisite: Botany 2A-2B.

**150. Readings in Biology (2) II**

Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles,, ecology, economic zoology, zoogeography, breeding habits and animal behavior. Not open to students with credit for Zoology 150.

**153. Economic Biology (2) I**

Study of the uses of plants and animals to man and the ways in which they injure him and his possessions. Consideration is also given to general methods of control and conservation. Prerequisite: Zoology 1A, Biology 1, or Biology 10B. Not open to students who have credit for Zoology 153.

**155. Genetics (2) II**

Principles of plant and animal genetics. Primarily for science majors. Two lectures per week. Not open to students with credit for Zoology 155. Prerequisites: Biology 10A-10B, Zoology 1A-1B or Botany 2A-2B.

**156. Genetics Laboratory** (2) II

Experiments and demonstrations illustrating the mechanism of heredity in plants and animals. Six hours of laboratory per week. Prerequisite: Zoology 155 or Botany 155, or concurrent registration in either. Not open to students with credit for Zoology 156.

**162. Agricultural Botany** (2) I

A study of California crop plants, their general identification, cultural methods, and regional distribution. Field trips to be arranged. Prerequisite: Botany 1 or Botany 2A-2B.

**199. Special Problems** (1-2) I, II

Work other than is outlined in the above courses. Admission by permission of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open only to students who have completed at least 15 units of botany with a grade A or B.

## CHEMISTRY

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in chemistry. Two plans are provided: One for students expecting to enter chemistry as professional chemists; the other for students intending to use chemistry in a related field. In addition, varying degrees of concentration in chemistry are available in the teaching major in physical science and in the chemical engineering option of the engineering major.

A *teaching major* is offered in chemistry for the general secondary credential or as part of the *general science major* for the general junior high school credential or as part of the *physical science major* for the general secondary credential. For specific information, refer to the outlines of the requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in chemistry. The minor must include Chemistry 1A-1B plus at least nine units of credit in upper division chemistry courses.

A *teaching minor* is offered in chemistry for the general secondary credential or as part of the *general science minor* for the general junior high, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of the requirements for these credentials.

### Curricula for Chemistry Majors in Arts and Sciences

Plan A, outlined below, is recommended for all students who intend to become professional chemists and leads to the A.B. degree. It is based upon the recommendations of the Committee for Professional Training of Chemists of the American Chemical Society, and qualifies graduates for many types of positions as chemists and provides the training required by most universities for admission to graduate work in chemistry. This department is on the approved list of the American Chemical Society.

Plan B is designed for students who do not intend to become professional chemists, but who desire the major in chemistry as part of a general education or in preparation for training in a related profession. By proper choice of electives, graduates can meet the requirements for admittance to medical schools. This plan is also suitable for students interested in teaching in secondary schools who desire more intensive chemical training than that required in the physical science major.

The recommended sequence for courses for each plan is presented below. All courses except electives are required. Some variation in sequence is permissible with the consent of the faculty adviser.

A major for the B.S. degree is offered in Chemistry. The requirements are the same as those for the A.B. degree except, (1) no foreign language is required, and (2) the student's program must lead to a four year occupational objective approved by the chemistry department adviser for the B.S. degree.

| | *Units* | |
|---|---|---|
| **Plan A** (For chemists) | *1st Sem.* | *2d Sem.* |
| First year | | |
| Chemistry 1A-1B | 5 | 5 |
| † Physics 4A | – | 4 |
| Mathematics 3A-3B | 3 | 3 |
| English 1 and 2 | 3 | 3 |
| Psychology 1 | 3 | – |
| Health Education 21 | 2 | – |
| Physical Education | ½ | ½ |
| | 16½ | 15½ |
| Second year | | |
| Chemistry 5 | 3 | – |
| Chemistry 101 | – | 4 |
| † Physics 4B-4C | 4 | 4 |
| Mathematics 4A-4B | 3 | 3 |
| German 1, 2 | 3 | 3 |
| Social Science | 3 | 3 |
| Physical Education | ½ | ½ |
| | 16½ | 17½ |
| Third year | | |
| Chemistry 102-103 | 3 | 3 |
| Chemistry 110A-110B | 3 | 3 |
| Chemistry 105 | 0–3 | 3–0 |
| Minor | 3–0 | 0–3 |
| Social Science | 3 | 3 |
| German | 2–3 | 3–2 |
| Elective | 2 | 2 |
| | 16 | 16 |
| Fourth year | | |
| Chemistry 111 | 3 | – |
| Chemistry elective | – | 2 |
| Minor | 3 | 3 |
| Electives | 9 | 10 |
| | 15 | 15 |

| | *Units* | |
|---|---|---|
| **Plan B** (For related professions) | *1st Sem.* | *2d Sem.* |
| First year | | |
| Chemistry 1A-1B | 5 | 5 |
| Physics 2A-2B | 3 | 3 |
| Physics 3A-3B | 1 | 1 |
| Mathematics 7A-7B | 3 | 3 |
| English 1 and 2 | 3 | 3 |
| Physical Education | ½ | ½ |
| | 15½ | 15½ |
| Second year | | |
| Chemistry 5 | 3 | – |
| Chemistry 101 | – | 4 |
| French or German 1, 2 | 3 | 3 |
| Health Education 21 | 2 | – |
| Psychology 1 | – | 3 |
| * Elective | 8 | 5 |
| Physical Education | ½ | ½ |
| | 16½ | 15½ |
| Third year | | |
| Chemistry 102-103 | 3 | 3 |
| Chemistry 110A-110B | 3 | 3 |
| Chemistry 105 | 3–0 | 0–3 |
| Minor | 0–3 | 3–0 |
| Social Science | 6 | 6 |
| | 15 | 15 |
| Fourth year | | |
| Chemistry elective | 3 | 2 |
| Minor | 3 | 3 |
| Electives | 9 | 10 |
| | 15 | 15 |

## Lower Division Courses

**1A-1B. General Chemistry** (5-5) Year, I, II

General principles of chemistry with emphasis on inorganic materials. Three lectures and six hours of laboratory per week. Qualitative analysis is included in the second semester. Prerequisites: Elementary algebra and plane geometry. Recommended: High school chemistry, physics, and additional mathematics.

**2A-2B. Fundamentals of Chemistry** (3-3) Year, I

A general course including inorganic, organic, and biological chemistry for students not intending to take further work in chemistry. Emphasis is placed on applications of chemistry to everyday life. Two lectures and one laboratory period per week. Not open to students with credit for Chemistry 1A-1B.

**5. Elementary Quantitative Analysis** (3) I, II

Theoretical consideration of the principles of gravimetric and volumetric analysis. Practice in standardizing reagents and analyzing samples. One lecture and quiz, and two laboratory periods per week. Prerequisite: Chemistry 1A-1B, and facility in the use of logarithms and slide rule.

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* Should include preparation for minor.

† The physics sequence, 1A-1B-1C-1D, formerly offered, will fulfill the requirement of Physics 4A-4B-4C for students who started physics before September, 1949.

## Upper Division Courses

**101. Introductory Organic Chemistry** (4) I, II

An introductory study of the chemistry of carbon compounds, both aliphatic and aromatic. The laboratory work illustrates properties and reactions of typical compounds and stresses development of technique. Three lectures and one laboratory period per week. Prerequisite: Chemistry 1A-1B.

**102. Organic Chemistry Laboratory** (3) I, II

Synthesis of typical aliphatic and aromatic compounds. Study of the theory and practice of laboratory operations. Approximately the last third of the course is devoted to the systematic qualitative analysis of organic compounds. Three laboratory periods per week. Prerequisite: Chemistry 101.

**103. Intermediate Organic Chemistry** (3) II

A continuation of Chemistry 101. Further study of types of aliphatic and aromatic compounds, their derivatives and interrelationship. Introduction to mechanisms of organic reactions. Three lectures per week. Prerequisite: Credit or registration in Chemistry 102.

**105. Advanced Quantitative Analysis** (3) I, II

Advanced work in the theory and practice of volumetric, gravimetric, and electroanalysis. One lecture, one quiz, and two laboratory periods per week. Prerequisite: Chemistry 5.

**110A-110B. Physical Chemistry** (3-3) Year, I

Theoretical principles of chemistry with emphasis on mathematical relations. Three lectures per week, problems and reports. Prerequisites: Physics 2A-2B, or equivalent; Math. 4B, or equivalent; Chemistry 5 and 101, or permission of the instructor.

**111. Physical Chemistry Laboratory** (3) I, II

Physico-chemical apparatus and measurements, with emphasis on technical report writing. Discussion period and three laboratory periods per week. Prerequisite: Chemistry 110B, or concurrent registration with permission of the instructor.

**114. Biochemistry** (3) I

The chemistry of carbohydrates, fats, proteins, enzymes, vitamins and hormones. Nutrition, intermediary metabolism and chemotherapy are discussed. Three lectures per week. Prerequisite: Chemistry 103 or by permission of the instructor. Recommended: Elementary biology or zoology.

**115. Biochemistry Laboratory** (2) II

Laboratory work in the testing, synthesis, isolation and analysis of biochemical materials. Chemical rather than biological considerations are emphasized. Two laboratory periods per week. Prerequisites: Chemistry 5, credit or registration in Chemistry 114. Recommended: Chemistry 155.

**116. Clinical Chemistry** (3) II

Lectures and laboratory work on the chemical composition of blood, urine, milk and body tissues. One lecture per week and two laboratory periods per week. Open primarily to students enrolled in the Laboratory Technician Curriculum. Prerequisite: Chemistry 115.

**118. Colloid Chemistry** (2) II (Offered 1951-52 and alternate years)

The theoretical principles of colloid chemistry and the preparation, properties and practical applications of colloids. Two lectures per week. Prerequisite: Chemistry 101, 110A and 110B.

**122. Glass Blowing** (1) II

Elementary training in the manipulation of glass. Prerequisite: Chemistry 1A-1B. One laboratory period per week.

**127. Advanced Inorganic Chemistry** (3) II (Offered 1950-51 and alternate years)

A lecture course dealing with such topics as the physical basis of the periodic system, complex inorganic compounds, and the nature of the chemical bond. Three lectures per week. Prerequisite: Chemistry 1A-1B. Recommended Chemistry 110A-110B.

**144A-144B. Principles of Chemical Engineering** (3-3) Year, I
Industrial stoichiometry, flow of fluids, heat transfer, unit processes and types of industrial equipment. Three lectures per week, problems and reports. Prerequisite: Credit or registration in Chemistry 110A.

**155. Instrumental Methods of Analysis** (2) I
Theory and practice of modern methods of instrumental analysis, including use of pH meters, colorimeters, spectro-photometers, and other analytical devices. Discussions, reports, field trips, special individual projects. Two laboratory periods per week. Prerequisites: Chemistry 5 and 101. Chemistry 105 is recommended.

**199. Special Problems** (1-2) I, II
Supervised individual work in specialized branches of chemistry. Admission only by the consent of the instructor. Hours of credit to be arranged in each case. Open only to students who have shown ability to do A or B work in chemistry.

### Graduate Courses

**200. Seminar** (2-2) I, II
An intensive study of some phase of advanced chemistry.

A. Advanced Organic Chemistry
B. Chemical Kinetics
C. Chemical Thermodynamics
D. Molecular Structure
E. Electrochemistry
F. Advanced Biochemistry
G. Spectrographic Analysis
H. Photochemistry
I. History of Chemistry

**290. Bibliography** (1) I, II
Exercise in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3) I, II
An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3) I, II
Guidance in the preparation of a project or thesis for the master's degree.

## COMMERCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in commerce with concentration in one of the following sub-fields: (A) Accounting, (B) Banking and Finance, (C) Business Administration, (D) Marketing, (E) Insurance, (F) Personnel Administration, (G) Office Management, (H) Secretarial. In addition to meeting the general lower division requirements for all students (except the foreign language requirement), the following courses are required of commerce majors in the lower division: Economics 1A-1B; Commerce 2 (not required in Marketing or Secretarial sub-fields. Students in the Secretarial sub-field are required to take 1A-1B and 5A-5B), 14A-14B (students in the Secretarial sub-field take 16A-16B instead), 18A-18B; Geography 1, Geography 10 or equivalent (not required of students in the Marketing sub-field); English 8 and 2. Students in the Marketing sub-field must also include Commerce 20, 24, 25, 27 and Art 7. Students in the Personnel Administration sub-field must include Commerce 3A-3B-3C, 20 and Psychology 11. Students in the Office Management sub-field must include Speech Arts 2A. Students in the Secretarial sub-field must include Commerce A, 1A-1B, 5A-5B.

Upper division requirements: A minimum of 24 upper division units. The following courses must be included for students majoring in (A) Accounting, (B) Banking and Finance, (C) Business Administration, (D) Marketing, (E) Insurance, and (F) Personnel Administration: Economics 111 or 170 or Commerce 123; Economics 140; Commerce 121; and 15 units selected from one of the following sub-fields:

A. *Accounting:* Com. 118A-118B, 160A-160B, 161A-161B, 162, 164A-164B, 165A-165B, 166.
B. *Banking and Finance:* Com. 133, 134, 137, 154; Econ. 131, 135, 142.

C. *Business Administration:* Com. 118A-118B, 123, 125, 126, 127A, 133, 134, 137, 153, 154, 184; Econ. 128, 135, 142, 150, 166, 170.
D. *Marketing:* Com. 120, 123, 124, 137, 153, 154, 184, 185, 186, 187A-187B, 188, 189, 196; Home Econ. 160A-160B.
E. *Insurance:* Com. 118A-118B, 125, 126, 127A-127B, 128A-128B, 128C-128D, 128E-128F, 133, 134; Econ. 133. Recommended: Econ. 170, Soc. 50, 51, 153.
F. *Personnel Administration:* Com. 103A, 121, 153, 154; Econ. 150, 151, 154, 185; Psych. 105A, 121, 145, 152.

Students majoring in (G) *Office Management* must include the following courses: Com. 103A, 105A-105B, 108, 121, 153, 154, 161A; plus nine units of directed electives selected from: Com. 113A-113B, 137, 162; Econ. 135, 140, 142, 150, 170; Psych. 121.

Students majoring in (H) *Secretarial Subfield* must include the following courses: Com. 103A, 105A-105B, 108, 113A-113B, 153; plus nine units of directed electives selected from: Com. 121, 123, 164A-164B, 186, 188; Econ. 111, 135, 142, 150, 170, with approval of the departmental adviser.

For a complete outline of the curriculum in commerce, refer to the section entitled: Preprofessional and Vocational Curricula.

A *teaching major* is not offered in commerce; however, certain courses in this field are required as part of the *teaching major in business education* for the general secondary credential and the special secondary credential in business education. For specific information, refer to the outlines of the requirements for these credentials.

### Minor

A *Minor in arts and sciences* is offered in commerce. Lower division requirements: Commerce 14A-14B; Economics 1A-1B. Upper division requirements: nine units of upper division commerce courses selected from one group as outlined above under the major. Students who elect the marketing group must complete Commerce 24 and 25 or 27 in the lower division.

A *teaching minor* is not offered in commerce; however, certain courses in this field are required as part of the *teaching minor in business education* for the general secondary, the general junior high school, or the special secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

Note: Courses in commerce may not be used to meet any part of the lower division social science requirement, nor may they be used as part of a social science major or minor.

**A. Business Mathematics** (1) I, II
A practical course in the mathematics of business. A thorough study of interest, compound interest, discount, insurance rates, etc.

**1A-1B, Typewriting** (3-3) Year, I
Development of a command of a keyboard, acquisition of speed and the artistic arrangement of typewritten material with special reference to commercial forms, tabulation and billing. (1A is a prerequisite for 1B.)

**2. Mathematics of Finance** (3) I, II
Interest and annuities; amortization; sinking funds; valuation of bonds; depreciation; mathematics of building and loan associations. Prerequisites: Two years of algebra in high school, or equivalents.

**2A. Personal-Use Typewriting** (3) I, II
A short course designed for those not wishing to enter the business office but desiring a knowledge of the use of the typewriter. Five hours laboratory practice.

**3A. Office Machines: Rotary Calculator** (1) I, II (1st six weeks of semester)
A six-weeks course designed to teach students the operation of the rotary calculator. Operations basic to statistics, accounting, and other areas needing this skill will be stressed.

**3B. Office Machines: Key-Driven Calculator** (1) I, II (2d six weeks of semester)
Same as 3A, except the key-driven calculator is substituted for the rotary calculator.

**3C. Office Machines: Printing Calculator** (1) I, II (3d six weeks of semester)
Same as 3A, except the printing calculator is substituted for the rotary calculator.

**4. Introductory Typewriting** (1) I, II
A short, introductory course building the fundamentals of typing in a six-weeks period. Students enroll for the first six weeks, the second six weeks, or the third six weeks in a semester. Not open to Business Education or Secretarial majors.

**5A-5B. Shorthand** (5-5) I
An intensive course designed for the practical preparation of office secretaries. A thorough study of the Gregg System. Development of the ability to read and write shorthand rapidly and correctly, both literary and commercial. The shorthand speed necessary to pass a civil service examination is attained by the end of the year. (5A is a prerequisite for 5B.)

**6A-6B. Advanced Shorthand** (3-3) I
Development of speed in writing and transcription. Advanced dictation on letter forms, legal forms, speeches, and literary and technical material. Prerequisite: Commerce 5A-5B or equivalent. (6A is a prerequisite for 6B.)

**English in Business** (See English 8)

**14A-14B. Principles of Accounting** (3-3) I, II
The balance sheet; profit and loss statement; the opening, conducting, and closing of books for different kinds of businesses; organizations, reorganizations, dissolutions, and consolidations, etc., keeping in view the best modern accounting practice. Five hours lecture and laboratory. (14A is a prerequisite for 14B.)

**16A-16B. Secretarial Accounting** (3-3) I
Course in secretarial accounting covering the principles of accounting and the application of those principles to the accounting work done by secretaries and teachers of business. Required for four-year secretarial and business education majors. (16A is a prerequisite for 16B.)

**18A-18B. Commercial Law** (3-3) I, II
The fundamental principles of business law. Cases showing the actual application of the principles to commercial and business transactions. The subjects covered: Contracts, sales, agency, negotiable instruments, insurance, and wills. Either semester may be taken first.

**20. Consumer Problems** (3) I
Consumer incomes; bases of consumer choice-making; practical problems of buying food, clothing, shelter, transportation, insurance, etc.; family budgeting; market structure and functions seen from the consumer's point of view. Not open to students with credit for Commerce 120.

**21. Organization and Management of Small Business** (3) I
Problems confronting the small business man with regard to finance, organization, management. Reasons for failures and success in small business.

**24. Retailing** (3) I, II
Study of retail stores, emphasizing the problems of store managers and merchandising executives; store location, organization, personnel, sales promotion, buying and handling of merchandise, inventory, turnover, and control methods. Problems of profitable operation under changing conditions.

**25. Salesmanship** (3) I, II
Theoretical and psychological backgrounds of salesmanship, newer concepts of selling; the selling of ideas and services; steps in a sale: Attention, interest, desire, closing; the development of clienteles and of good will; the personal factor in salesmanship.

**26. Applied Salesmanship** (2) II

Practice in selling; supervised work in cooperating stores, or outside selling; relationships between theory and practice. Prerequisite: Commerce 25 and permission of instructor.

**27. Advertising Principles** (3) I, II

Advertising as a sales promotional tool in marketing activities; consumer, market and product analysis; advertising media; preparation of advertisements; measurement of advertising effectiveness; economic and legal aspects of advertising; public relations; advertising campaigns.

**65A-65B. Record Keeping.** (1-3 each semester) Year, I

Application of accounting practice and principles to accounting practice; the technical arrangement of accounting forms, records and reports found in business. Prerequisite: Commerce 14A or 16A. Commerce 65A is a prerequisite for 65B.

**103A. Office Management** (3) I, II

A study of the functions of the office, duties of the office manager, organization of the office, communication functions, physical facilities involved, personnel relationships of management and worker, and the controls necessary for efficient output.

**105A. Office Systems** (3) I, II

A course designed to develop fundamental skills in the figuring and bookkeeping machines used in offices, together with their interrelating functions as these affect office systems.

**105B. Office Systems** (3) I, II

The relationship of voice-writing, addressing, and duplicating machines to office procedures and routines is studied and skills developed in these areas of use.

**108. Records Management** (3) I, II

Intensive survey of the various means of preparing, keeping, storing, and disposal of office records to facilitate the efficient management of business. Various systems of records management will be studied together with the equipment and supplies required.

**113A-113B. Secretarial Office Practice** (5-5) Year, I

Practice in the duties and routines of office work as required of the stenographer and secretary with special emphasis on the shorthand dictation and transcription problems arising in various types of offices. Prerequisite: Commerce 1A-1B, 5A-5B, or their equivalent.

**118A-118B. Advanced Commercial Law** (3-3) Year, I, II

An advanced study of the law of personal and real property, partnership, corporation and the laws regulating trade and trade practices and competition. Elective for commerce majors.

**120. Consumer Income Management** (3) I

Functions and responsibilities of consumers; problems of choice-making; planning expenditures for housing, household operation, insurance and investments. Economics of installment buying, borrowing procedures, control of frauds, legislation affecting consumers. Not open to students with credit for Commerce 20.

**121. Business Administration** (3) I, II

Problems of business administration as an interrelated whole. A discussion of the problems of the business administrator with particular reference to the character of the problems involved and to the control policies and devices of the manager. Prerequisite: Economics 1A-1B.

**123. Marketing Principles** (3) I, II

Study of marketing functions; activities of producers, wholesalers, retailers and other middlemen; channels of distribution; integration of marketing activities; price policies; government regulation. Prerequisite: Economics 1A-1B.

**124. Marketing Administration** (3) II

An advanced course dealing with all the phases of marketing utilized in most distributive campaigns. Solutions of practical problems faced by producers, wholesalers, retailers and other middlemen in the marketing of their products. Prerequisite: Commerce 123.

**125. General Insurance** (3) I

Economic theory of risk; transfer of risk; distribution and prevention of loss; types of insurance carriers; problems of rate making; the insurance contract; coverages; special forms of life, fire, marine and casualty insurance; state supervision.

**126. Casualty Insurance** (3) II

The nature and reasons for existing practices in compensation and casualty insurance. The social and legal bases of insurance, fundamental principles of rate making, policy provisions, state regulation and state insurance. Prerequisite: Commerce 125.

**127A. Life Insurance—Principles and Practice** (3) I

Types of life insurance companies and associations, home office and agency organization, types of contracts, surrender value, policy loans and extended insurance, surplus and dividend policies, reserves, group, industrial and social insurance, and state supervision.

**127B. Life Insurance Salesmanship** (3) II

Special problems of life insurance selling, with emphasis on the psychological aspects of insurance selling, on specific techniques for finding prospects, for managing the sales interview. For students interested in life insurance selling, and those planning to obtain life underwriter's certification.

**128A-128B. Advanced Life Insurance** (3-3) Year, I

An advanced course in life insurance. The emphasis is on preparation for the C. L. U. Certificate. 128A is a prerequisite for 128B.

**128C-128D. Advanced Life Insurance** (3-3) I

Prepares the student for Part D of the Chartered Life Underwriters examination showing how life insurance strengthens banking credit, financial structure of corporations, and partnerships; also, life insurance as an investment. Commerce 128C is a prerequisite for Commerce 128D.

**128E-128F. Advanced Life Insurance** (3-3) Year, I

Prepares for part of the Chartered Life Underwriters examination. Covers the four sections, "Life Insurance Fundamentals," "General Education," "Law, Trust and Taxes," and "Finance"; teacher proficiency in the analysis of cases or problems. Commerce 128E is a prerequisite for Commerce 128F.

**133. Corporation Finance** (3) I

The corporate form of organization, instruments of long-time finance, methods of raising capital, efficient financial management, the financing of reorganizations, and governmental control. Prerequisite: Economics 1A-1B. Not open to students who have credit for Economics 133.

**134. Investments** (3) II

Investment principles and practices with emphasis upon problems of the small investor, such as tests of a good investment, sources of information, types of stocks and bonds, mechanics of purchase and sale, investment trusts, real estate mortgages, and the like.

**137. Credits and Collections** (3) I

The credit man and his work, including the instruments with which he works, sources of credit information, the technique of his department, collection methods, legislation for the protection of debtor and creditor, and credit insurance.

**153. Personnel Administration** (4) I, II

Problems in the management of personnel relations, including techniques of selecting, training, supervising and rating employees. Methods used by management in job evaluation; wage and salary payment plans; employee services; health and safety; union relationships; stimulation of interest.

**154. Wage and Salary Administration** (3) I

Problems of job analysis; major techniques of job evaluation, including ranking, classification, point system, factor comparison; problems of wage and salary administration, incentive pay methods; merit rating plans. Not open to students with credit for Political Science 146.

**160A-160B. Advanced Accounting** (3-3) Year, I

An intensive study of the corporation, its accounting and financial problems; thorough study of the balance sheet; depreciation; factory accounting, etc. Prerequisite: Commerce 14A-14B. (160A is a prerequisite for 160B.)

**161A-161B. Cost Accounting** (3-3) Year, I

Principles and methods of cost accounting in the mercantile establishment an in the factory. A study of industrial accounting procedure, the forms used, and thei application to practical problems. 161A is a prerequisite for 161B.

**162. Accounting Systems** (3) I

The accounting systems used in various types of business and financial concerns Some practice in devising and installing systems. Prerequisite: Commerce 14A-14B

**164A-164B. Income Tax Procedure** (3-3) Year, I

A study of the laws and a consideration of the problems arising from state an federal income, inheritance and corporation tax. 164A is a prerequisite for 164B.

**165A-165B. Auditing** (3-3) Year, I

The fundamental principles of accepted procedures of auditing and related types of accounting engagements. 165A is a prerequisite for 165B.

**166. Financial Statements** (3) I

The construction, composition, analysis and interpretation of accounting reports with particular emphasis on the form, content and phraseology of reports. Prerequisite: Commerce 160A-160B.

**167. Governmental Accounting** (3) II

A comparative study of accounting systems used by municipalities, counties, and the State of California; detailed comparisons with commercial practice; procedures in handling budget accounts, appropriations, and encumbrances; subsidiary records; cost records; internal checks; auditing.

**184. Sales Management** (3) I

Consideration of problems confronting the modern sales executive; selection, training, compensation and control of the sales force; sales analysis; sales quotas; sales costs and budgets; market and product research and analysis; coordination of personal selling with other form of sales effort.

**185. Advertising Copy and Layout** (2) I

Introduction to principles and techniques of copy writing; types of copy; preparation of layouts; mechanical methods employed by the artist, engraver and printer; legislation and regulations affecting advertising claims. Prerequisite: Commerce 27, or permission of instructor.

**186. Store Management Problems** (2) I

Locations, buildings, layouts and fixtures; store supplies and maintenance; receiving, marking, storing, wrapping and delivering merchandise; customer service, adjustments, credit and collections; expense control. Prerequisite: Commerce 24, or permission of instructor.

**187A. Buying Techniques** (2) I

Merchandising in department and specialty stores; customer demand; functional bureaus that aid in buying; stock plans; merchandise resources; foreign buying; trading techniques; terms and discounts; credit and shipping terms; the regulation of trade practices. Prerequisite: Commerce 24, or permission of instructor.

**187B. Merchandising Techniques** (2) I

Methods of dollar and unit control; pricing, turnover, inventory methods and control; legislation; budgets; arithmetic of merchandising; profitability of specific methods of merchandising. Prerequisite: Commerce 24, or permission of instructor.

**188. Advertising Media** (2) I

A thorough coverage of advertising media. Market characteristics; rates and sources of information; evaluation of media; problems of coverage, duplication, costs and scheduling; advertising salesmanship. Prerequisite: Commerce 27, or permission of instructor.

**189. Advertising Problems** (3) I

Principles of advertising applied to the solution of actual advertising problems encountered by business firms. Estimating opportunities for effective use; promotional campaigns; selection of media, retail advertising, national advertising, advertising agencies; advertising services of publishers. Prerequisite: Commerce 27 or permission of instructor.

**196. Work Experience** (2)

Supervised work in cooperating stores or offices; relationship between theory and practice in specific business conditions. (Takes place of Commerce 26.) Prerequisite: Permission of instructor.

**198A-198B. Investigation and Report** (1 to 3 each semester) Year, I

A comprehensive and an original study of a problem connected with business under the direction of one or more members of the commerce staff. Prerequisite: Senior standing and permission of the instructor. 198A is a prerequisite for 198B.

## Graduate Courses

**200. Readings in Current Literature in Business Education** (2) I

Specialized reading in one or more phases of business education, followed by a discussion and written report of the value of each article read.

**203. Secretarial Administration** (2)

An intensive study of the problems of office management and their solution. The relation of records, reports, budgets and manuals to managerial control. Prerequisites: Commerce 3A, Commerce 14A-14B, 121.

**213. Problems in Business Education** (2) II

Designed to fit the needs of individual students and their problems through the writing of research papers, of a term or individual study nature. The studies to be made will cover the principles of good teaching, trends in Business Education, current literature.

**221. Basic Business Education** (2)

An introduction to the content and methodology of teaching basic Business Education.

**223. Problems of Distributive Business** (2)

Critical Analysis of distributive business problems in the light of changing economic, social and governmental conditions. Prerequisite: Commerce 121, 123.

**233. Administration and Supervision of Business Education** (2) I

Designed to provide students who hold, or who expect to hold, administrative positions in Business Education with the techniques necessary for successful executive work.

**260. Advanced Problem Analysis** (Accounting) (2)

The study of conditions causing various accounting problems with special emphasis upon the theory and practices involved in their solution. Prerequisite: Commerce 160A-160B, 161, 165.

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)

An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

# COMPARATIVE LITERATURE

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is not offered in comparative literature; however, courses in this field may be used as part of the English major in arts and sciences. For specific information, refer to English.

A *teaching major* is not offered in comparative literature, however, courses in this field may be used as part of the teaching major in English for the general secondary and general junior high school credentials with the approval of the departmental representative. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in comparative literature. The minor must include at least 15 units of work in comparative literature, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in comparative literature; however, courses in this field may be used as part of the teaching minor in English for the general secondary, the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**52A-52B. Masterpieces of World Literature** (3-3) Year, I

A chronological survey from Homer to modern times. The first semester stresses the classical epic and tragedy. The second semester, beginning with the Renaissance, stresses prose fiction, the drama, and the essay. Not open to students with credit for English 52A-52B.

### Upper Division Courses

**101A. Modern Continental Fiction** (3) II

A survey of leading French, Russian, Scandinavian, Italian, and German novelists and short story writers, from Tolstoy and his associates to the present day.

**104A-104B. Spanish American Literature** (3-3) Year, I

For a description of this course, see Spanish 104A-104B, which may be taken for credit in Comparative Literature by doing the required reading in English translation.

**115. The Bible as Literature** (3) I

A study of the narrative, poetry, and prophecy of the King James version of the Bible. Readings, reports, lectures, and discussions.

**138. Introduction to Aesthetic Appreciation** (1) I

Major forms of expression and aesthetic experience in art, music and literature, presented by an interdepartmental staff through lectures, demonstration, and panel discussions. Not open to students with credit for Aesthetics 138.

**140A-140B. Masterpieces of French Literature** (3-3) Year, I (Offered in 1951-52)

A cultural course designed to be given in introduction to the great French works from the Song of Roland through Cyrano de Bergerac, with emphasis on the 16th, 17th, 18th and 19th century authors. The contributions to world thinking of Rabelais, Montaigne, Moliere, Racine, Descartes, Pascal, Montesquieu, Voltaire, Rousseau, Hugo, Balzac, Flaubert, Maupassant, Zola, will be studied through lectures and outside readings.

**142. The Golden Age of German Literature** (3) II

Masterpieces of German Literature from the 18th and early 19th centuries. English translations read. No knowledge of German required.

**152A-152B. Survey of Drama** (3-3) Year, I

Study of selected tragedies and comedies from Asiatic, European, English, and American literature, with emphasis upon the human problems depicted therein and upon the timelessness of certain themes, such as those of Electra and Medea. Lectures, discussions, and reports on readings. Not open to students with credit for English 152A-152B.

**[illegible] Literature of the Continental Renaissance** (3) II

Development of Renaissance literature in western and southern Europe. Studies n the works of Dante, Petrarch, Ariosto, Tasso, Erasmus, Calvin, Cervantes, Rabeais, Montaigne, and other significant authors.

**158. Classicism in European Literature** (3) I (Offered in 1951-52)

Aims, ideals, themes, influences, literary manners and methods of the period of classicism in European literatures, particularly that of France. Studies in the writings of Moliere, Racine, Descartes, Boileau, Montesquieu, Voltaire and others.

**159. The Rise of Romanticism in European Literature** (3) II

Continental origins and growth of the romantic movement. Studies in the works of Rousseau, Goethe, Schiller, Lessing, Chateaubriand, Mme. de Stael, and others.

**199. Special Problems** (1-3) I, II

Students who have demonstrated ability in literary studies may enroll for work other than is outlined in the regular courses. Admission only by consent of the instructor with whom the work is to be done.

# ECONOMICS

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in economics. Lower division requirements: Economics 1A-1B; Commerce 14A-14B; and at least one year sequence of 6 units from the following groups: Political Science 1A-1B, or 71A-71B; History 4A-4B, or 8A-8B, or 17A-17B; Psychology 1 and 5; Sociology 50-51; or Anthropology 1A-1B. Recommended: Commerce 18A-18B; Geography 1, 10; Mathematics C. Upper division requirements: A minimum of 24 upper division units including Economics 100A, 140, and 18 additional units in economics. A maximum of 6 of the additional units may be chosen from courses in a related field with the approval of the departmental representative.

A *teaching major* is offered in economics for the general secondary credential or as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in economics. The minor must include at least 15 units of work in economics, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in economics for the general secondary credential, or as part of the *social science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. Principles of Economics** (3-3) Year, I, II

The basic principles of economics: Business organization and production; money, credit and banking, depression problems; prices, competition, and monopoly; income distribution; public finance; international trade; economic systems. Aims of course: Foundation for further study, business pursuits, and intelligent economic citizenship. Prerequisite: Sophomore standing. 1A prerequisite for 1B.

## Upper Division Courses

**100A. Intermediate Economic Theory** (3) I, II

Advanced economic theory with special reference to value and distributio Special attention is given to marginal utility theory, and to the contribution of moder economic thought. Prerequisite: Economics 1A-1B.

**100B. Intermediate Economic Theory** (3) II

Essentially a continuation of 100A, with emphasis on the income approac employment, and the Keynesian analysis. Prerequisite: Economics 1A-1B. (Con pletion of Economics 100A recommended, but not a prerequisite for 100B.)

**102. Comparative Economic Systems** (3) II

The economic aspects of laissez-faire and regulated capitalism, cooperative socialism, communism, nazism, fascism. Experience in Russia, Germany, Unite States, Great Britain. Criteria for evaluating economic systems. The individual an government in each system. Planning in a liberal capitalistic society.

**105. Economics of Consumption** (3) I

An analysis of the determination of consumer demands, the relationship of th consumer to the price system, the effects of consumption and saving upon income an employment, the effects of monopoly and advertising upon consumers' welfare.

**110. Economic History of Europe** (3) I

A general survey of economic development from the Middle Ages to the present Particular attention is given to the impact of the Industrial Revolution on nationa economics, particularly on England's commerce and industry.

**111. Economic History of the United States** (3) II

A comprehensive survey of American economic development and of nationa legislation in the field of industry and commerce.

**128. Land Economics** (3) I

Real estate in its various aspects: Property rights, transfer of title, valuation finance, selling, property management, taxation, insurance, city planning, etc., with special emphasis upon problems as they exist in San Diego.

**131. Public Finance** (3) II

Principles and practices of taxation and public expenditures. Economic effects of public spending, debts and taxation. Financing social security and other services. Fiscal policy and prosperity. Relation to inflation and deflation. Special emphasis on social problems involved.

**133. Corporation Finance** (3) I, II

The corporate form of organization; instruments of long-time finance; methods of raising capital, efficient financial management, financing of reorganizations, and government control. Not open to students who have had Commerce 133.

**135. Money and Banking** (3) I, II

The elements of monetary theory. History and principles of banking with special reference to the banking system of the United States. Prerequisite: Economics 1A-1B.

**140. Statistical Methods** (3) I, II

Statistical method in the social sciences. Tabular and graphical presentation. Frequency and time series analysis. Index numbers and correlation techniques. Prerequisite: Mathematics A-B, and C, or equivalent. Not open to students with credit for Sociology 103, Psychology 104A, 104B.

**142. Business Cycles** (3) I

Fundamental factors in business cycles are analyzed and cycle theories are examined. Study of current business conditions begins early in the course and develops into practical application of forecasting methods to both business and other data. Prerequisite: Economics 1A-1B.

**150. Labor Problems** (3) I

A study of labor organizations and their policies, wages, strikes, unemployment, social insurance, child labor, labor legislation, plans for industrial peace, and other labor problems.

**151. Principles of Labor Legislation** (3) II
Federal, state and local laws and regulations concerning labor problems, industrial relations, and governmental policies with respect to labor; important court decisions; the make-up and functions of commissions and boards; labor union attitudes with respect to legislation and the courts.

**170. Government and Business** (3) I, II
General survey of governmental activities affecting business; the state as an entrepreneur and manager; governmental assistance to business; governmental regulation of business in its historical, legal and economic aspects, including recent developments in the United States and abroad; proposed policies.

**171. Transportation** (3) I
The development of railway transportation; railroad financing; rates and rate making; governmental regulation; government operation of railroads during the war; recent development of motor and air transportation. Prerequisite: Economics 1A-1B.

**172. Public Utilities** (3) II
The growth of public utilities in the United States; economics of public utility rates; valuation; public regulation and its legal basis; public ownership. Prerequisite: Economics 1A-1B.

**185. Social Insurance** (3) I
Old age pensions, health insurance, unemployment insurance, and Social Security Act. Strength and weakness of existing systems.

**190. Principles of Foreign Trade** (3) I
National welfare and foreign trade. Principle of comparative costs, comparative advantages in various nations. Foreign exchange and the balance of payments, financing foreign trade. Regulations over trade and obstructing factors. Techniques of exporting and importing. Doctrines of international trade.

**195. International Economic Relations** (3) II
Important aspects of international cooperation and conflict in the economic sphere, conditions essential to future cooperation. The quest for foreign markets, raw materials, investment opportunities and population outlets. Commercial policies, international economic conferences and organizations. Colonial rivalries and postwar problems.

**198. Investigation and Report** (3) I, II
Designed to stimulate independent study and investigation; to furnish guidance in the collection, organization, and presentation of factual material; to improve the technique of term reports. For economics majors only.

**199. Special Study** (1 or 2) I, II
Designed exclusively for seniors with a major in economics.

### Graduate Courses

**200A-200B. Seminar in the Development of Economic Thought** (2-2) Year I, II
A critical study of the development of economic thought and of contemporary economic thought, in order to provide a clearer understanding of major economic problems of the day.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)
An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

# EDUCATION

## IN THE DIVISION OF EDUCATION

### Major

A *major in arts and sciences* is not offered in education; however, education is major for the general elementary and kindergarten-primary credentials. For specif information, refer to the requirements for these credentials.

A *teaching major* is offered in education for the general elementary and kinde garten-primary credentials.

### Minor

A *minor in arts and sciences* is offered in education. This minor consists of minimum of 15 upper division units in education selected from Education 102A-102I 102C-102D, 115A-115B with the approval of the Dean of Education.

A *teaching minor* is not offered in education.

Students will be admitted to education courses only when they are admitted t teacher education or have permission from the Dean of Education. Students who tak a minor in education must have been regularly admitted to teacher education. (Se Admission to Teacher Education).

### Lower Division Courses

**A. Review of Arithmetic** (0) I, II

**H. Review of Handwriting** (0) I, II

**R. Review of Reading** (0) I, II

**S. Review of Spelling** (0) I, II

Noncredit courses designed to increase competence in the skill subjects. Fo students who do not qualify on the respective sections of the Fundamentals Tes required of all applicants to teacher education.

### Upper Division Courses

**100B. Methods and Materials of Instruction and Audio-Visual Aids**
Major (2) Minor (1) I

Professional courses in specific teaching fields taken just prior to or concurrently with the first directed teaching assignment. Each course emphasizes the application of best practice with reference to each subject area named.

Subject fields for sections in 100B are as follows:

100B-A, Methods in Art
100B-B, Methods in Accounting
100B-BE, Objectives and Curricula in Business Education
100B-E, Methods in English
100B-L, Methods in Romance Language
100B-MA, Methods in Mathematics
100B-ME, Methods in Merchandising
100B-MU, Methods in Music
100B-PE, Methods in Phys. Ed. (Men)
100B-PE, Methods in Phys. Ed. (Women)
100B-SC, Methods in Science
100B-S, Methods in Shorthand
100B-SA, Methods in Speech Arts
100B-S.SC, Methods in Social Science
100B-SS, Methods in Secretarial Subjects
100B-T, Methods in Typing

**102A. Measurement and Evaluation in Elementary Education** (3) I, II

The use of intelligence and achievement tests in the diagnosis and improvement of learning; construction of objective examinations; problems of evaluation in education; the elements of statistical techniques.

**102B. Child Growth and Development** (3) I, II

Study of the mental, emotional, social, and physical development during childhood and early adolescence. Directed observation required. Not open for credit to students with credit for Home Economics 102.

**102C. Growth and Development of the Adolescent** (3) I, II

To improve understanding of adolescent physiological, psychological, social, and emotional development. Field work with adolescent groups in the community is required.

**102D. Measurement and Evaluation in Secondary Education** (2) I, II

Problems of evaluation in secondary education, construction of examinations, the elements of statistics, the selection and interpretation of standardized measures, and appraisal of audio-visual instructional materials. Field work required. Prerequisite: Education 130.

**105A. Introduction to Psychological Testing** (3) I, II

The basic principles of testing. The selection and critical evaluation of group tests of intelligence, personality, aptitude, interest and achievement. Prerequisite: One of the following courses: Psychology 5, 11; Education 102A, 102D. Not open for credit to students with credit for Psychology 105A.

**112A. Methods in Teaching Americanization Classes** (2) Extension only

Methods used in teaching the various grade levels found in Americanization classes, including those preparing for their naturalization. Includes discussion of new skills and techniques in learning to speak, read, and write English; aids in organizing and conducting classes; and in helping teachers to understand backgrounds of foreign born.

**115A. History and Philosophy of Education** (2) I, II

Historical backgrounds and underlying philosophies upon which the public school system has been established. Emphasis on the meaning of education, educational aims and values, and democracy and education. Prerequisite: Senior standing or the equivalent; minimum of 12 units of education.

**115B. Secondary Education** (3) I, II

An introduction to understanding the development of secondary education and its present status as a social institution. Topics developed include: Curriculum; teaching methods; audio-visual instructional materials; organization and administration; guidance; and objectives. Field work required.

**116. Directed Teaching** (3-12) I, II

Systematic observation, participation and teaching under supervision in the campus elementary school, the affiliated elementary, junior high and senior high schools. During each semester of student teaching a weekly conference period is required as indicated in the time schedule. Prerequisite: Admission to teacher education; education program approved by Director of Elementary or Secondary Education.

**117A. Elementary Music Education** (2) I, II

Objectives of music teaching; study of the child voice; and organization of song material by grades. Procedure in presenting rote songs, ear training, elementary notation, music reading, and part singing. Prerequisite: Music 1A, or the equivalent. Not open to students who have had Music 7A.

**117B. Methods in Instrumental Music** (2) I, II

The theory of organizing and conducting school bands and orchestras, and the selection of materials. Provides practical experience in conducting a children's orchestra and teaching sectional groups. Systematic planning for pupils of various ages and abilities.

**119. Art in the Elementary School** (2) I, II

Discussion of the elements and principles of art and their place in the art expression and appreciation of the elementary school child. Laboratory experience in elementary school problems. Not open to students taking the elementary credential. Prerequisite: Art 6A.

**122. Social Studies in the Elementary School** (2) I, II
The purpose, scope, organization and development of instructional procedures the social studies in the elementary school. Development of curriculum units and th analysis of teaching materials. The summer course provides observation in the demonstration school.

**123. Science in Elementary Education** (3) I, II
Elementary science and its relation to instructional units in the social science the construction and use of equipment, the effective use of audio-visual aids, the use environmental resources, and the use of texts and supplementary material.

**125. Curriculum in Elementary Education** (3) I, II
A survey of the following elementary subject areas: The language arts, mathematics, music, science, and the social sciences. Emphasis upon the selection of conten teaching methods, and materials as they relate to social needs, psychological principle and the nature of the learner.

**126. Literature in Elementary Education** (3) I, II (Irregular)
Criteria for the selection of children's literature, children's reading interests, th development of units of instruction in the social studies, the use of the verse choi dramatic readings and similar procedures, and the use of the library.

**129. Arithmetic in Elementary Education** (2) I, II
For teachers of arithmetic in the elementary and junior high school. Emphasis i placed upon the understanding of the systems of notation and language techniques Opportunity will be given for the development of instructional materials an procedures.

**130. Educational Psychology** (2) I, II
To develop understanding of the applications of psychological research for effective classroom teaching. Observation and field work required. Prerequisite: Psychology 1. Not open to students with credit for Psychology 130.

**134. Behavior Problems in Early Childhood** (1) Summer
Lectures and related readings on the typical behavior problems of two to twelve year olds, for teachers and parents.

**136. Reading in Elementary Education** (3) I, II
Scientifically developed procedures for determining reading readiness, beginning reading, independence in work recognition, vocabulary development, word analysis, standards of attainment, types of reading programs, and the selection, preparation and use of reading materials.

**138. Workshop in Family Life Education** (3) Summer
Series of lectures, discussions, and laboratory sessions devoted to furthering understanding of the problems of family life education. The student will have an opportunity to develop units suitable for a program of family life education. Community agencies will participate in the workshop.

**143. Adult Education** (3) I, II
A study of the aims and scope of adult education and its function as a part of the public school system. Individual and group work will be emphasized. Admission by permission of the instructor.

**144. Diagnosis and Remedial Treatment of Difficulties in Reading** (3) I, II
The causes of reading difficulties and the procedures for diagnosis and remedial treatment. Practical work with children with reading problems. Primarily for principals, supervisors and teachers-in-service. Prerequisite: Education 102B or Education 102A, and Education 136, or one year of successful teaching experience.

**145A. Organization and Administration of Music Education** (2) I, II
Theory of the general principles of music administration; correlation of music with the various subjects in the public schools; music tests; creative work.

**145B-145C. Instrumental Conducting Methods** (1-1) Year, I
Baton technique. Scores will be studied of works suitable for various levels of advancement for school orchestras and bands. Practical experience in conducting actual groups will be given in class.

**146. Education Practicum** (Kindergarten-Primary) (4) I, II

A continuation of Education 148 and will accompany Education 116 in the kindergarten. A study of the theory of early childhood education providing experience with children of nursery school and kindergarten ages. Prerequisite: Education 147, 148.

**146B. Interpretation of Early Childhood Behavior** (3) Summer

For kindergarten-primary teachers treating the analysis and interpretation of early childhood behavior. Emphasis on understanding and interpreting the causative factors in typical behavior of children to parents, social workers, teachers, and others concerned with the guidance of kindergarten-primary children.

**147. Education Practicum** (10) I, II

Required of all students who expect to receive a credential which will qualify them to teach in the kindergarten or in the elementary school. Students should take the course during the next semester after admission to teacher education, which is usually the first semester of the junior year. Registration is strictly limited to those who have been approved by the Committee on Admission to Teacher Education.

The content of the Education Practicums include both classroom participation (directed teaching) and the study of the principles of education. Education Practicum is a unified course which deals with the interpretation and intelligent application of theory and practice in elementary education. The child and accumulated knowledge are studied as one affects the other. The psychology of learning is interpreted while the college student is immediately associated with children in the process of learning. Daily classes are held in which the psychology and philosophy of education are studied and analyzed as systems of knowledge and concurrently interpreted in reference to the actual teaching participation to which the student is assigned for one hour daily. The course includes Reading and Elementary School Methods (3); Elementary Art Education (1); Elementary Music Education (1); Language Arts (2); Arithmetic (3); Observation Audio-Visual-Radio Instruction is integrated with the course, equivalent to 2 units.

The course is taught by college teachers who supervise in the Campus Elementary School, and other faculty members.

**148. Education Practicum** (12) I, II

This course is a continuation of Education 147 and is required of all students who are candidates for the general elementary credential or the kindergarten-primary credential. An extended analysis is made of the psychology of education in various fields and application is made through directed teaching in grades 4 to 6. The course includes Elementary Social Studies (2); Elementary Science Education (1); Elementary Art Education (1); Elementary Music Education (1); Education Psychology (learning process and theory of audio-visual education) (3); additional 4 units for General Elementary only: Curriculum in Elementary Education (2); Directed Teaching (2); Audio-Visual-Radio Instruction (0). Prerequisite: Education 147.

**149A. Laboratory in Elementary Education** (3) Summer

A general course in observation and theory, including a study of arithmetic, reading, language, music, science, social studies, art, spelling. Students in this course will observe in the summer demonstration school and discuss with the staff the teaching procedures.

**149C. Laboratory in Rural Education** (6) Summer

Obervation in a one-room multigraded summer demonstration school. Students will observe demonstrations, discuss procedures with the staff, and prepare material for their own schools.

**149D. Workshop in Elementary Education** (3 or 6) Summer

To meet the needs of individual or groups of teachers who desire to study selected problems in elementary education. The observation of classroom teaching will be provided for members in attendance. Interested persons should correspond with the Director of Elementary Education, San Diego State College.

**155. Principles of Guidance** (3) I, II

A study of the basic principles of guidance and their function in the educational process.

**156. Guidance Conference** (1) Summer

A series of lecture and discussion sessions centering on current problems i counseling and guidance. Designed to serve the needs of any person desiring to kee informed of developments in this area. Admission upon permission of the directo of this conference.

**158. Supervision of Child Welfare and Attendance** (3) Summer

Content includes laws relating to children, guidance principles, social case work agency relationships, conference techniques, home visitation methods, employmen supervision, attendance work, child accounting, familiarity with testing techniques

**161. Legal Aspects of Education** (3) I, II

A study of the school law of California, important court decisions, rulings of th California State Superintendent of Public Instruction and the Attorney General historical and current trends, and comparative data from throughout the United States.

**171. Audio-Visual Conference** (1) Summer

A series of lectures, discussions and demonstrations, centering on problems in the use of audio-visual instructional materials. Designed for teachers, administrators, audio-visual representatives, and others interested in current developments in this area. Course may be taken twice for credit.

**174. Audio-Visual-Radio Education** (2) I, II

A study of audio-visual-radio aids as they affect learning. Analysis and development of materials of instruction and their presentation; operation of equipment.

**174BE. Audio-Visual Business Education** (3) Summer

A review of the skills and knowledges necessary to use audio-visual aids, followed by intensive study and research in the literature available and by practice with the materials and techniques that apply to business education.

**175. Creating Audio-Visual Materials for Classroom Use** (3) I

Practice in the creation and evaluation of instructional materials, such as 35 mm. film strips, 16 mm. films, scripts, recordings and other audio-visual materials. Prerequisite: Education 174, or equivalent.

**176. Problems of Speech Correction and Articulation** (3) (Irregular)

Analysis and discussion of the major articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Not open to students with credit for Speech Arts 176.

**177. The Teaching of Lip Reading** (2)

History, theory and methods of lip reading. Aids for the classroom teacher; program and materials of instruction for the specialized teacher. Opportunities for practice teaching are offered. Not open to students with credit for Speech Arts 177.

**178. Problems of the Hard of Hearing** (2)

The adjustment of the hard-of-hearing group with emphasis on the public school child. State and county hearing programs; technique of audiometry; use of hearing aids; educational, classroom, and social problems.

**179A-179B. Nervous Speech Disorders** (3-3) Year, I

Classification and study of speech defects and disorders. Training in corrective technique for public schools; observation. Required for the Special Secondary Credential in Correction of Speech Defects. Not open to students with credit for Speech Arts 179A-179B.

**181. Exceptional Children** (3) I

Characteristics and adjustment problems of mental, physical, and emotional deviates; emphasis upon the mentally handicapped.

**182. Curriculum and Methods for Mentally Retarded Children** (3) II

Selection, organization and presentation of curricular materials for mentally retarded children.

**183. Practicum for Teaching Mentally Retarded Children** (3) Summer

Analysis and interpretation of educational procedures utilized with the retarded learner. A demonstration class will be available for observation. Education 182 must be taken prior to, or concurrently with, Education 183.

**184A. The Secondary School** (4) I, II

To orient the student toward his function as a teacher in the public secondary schools, including basic principles, history and philosophy of education, and audio-visual instruction, and to understand the school as a social institution. Field work required.

**184B. Development and Learning** (4) I, II

To acquaint the student in secondary education with the nature of development and the learning process, with consideration of mental hygiene, guidance and the place of audio-visual aids. Field work required.

**184C. The Teaching Process** (4) I, II

To develop teacher competency at the secondary level in relationships and planing with the pupil, the community, and the profession, including classroom management, audio-visual education, lesson planning, evaluation, and co-curricular activities. Field work required.

**189. Workshop in Secondary Education** (3 or 6) Summer

Designed to meet the needs of individual or groups of teachers who wish to develop or continue the study of some problem with the consultation of the College Staff and the San Diego County Curriculum Staff.

**191. Driver Education** (2) Summer

A workshop type course designed to prepare teachers of the course in high school. Enrollment by permission of the instructor.

**199. Educational Problems** (1-6) I, II, and Summer

For senior and graduate students in education who have shown ability to work independently. Problem to be chosen after consultation with a staff member. Admission by permission of the staff. Credit and hours to be arranged.

## Graduate Courses

For general requirements for admission to graduate courses, see statement on Admission to Graduate Status in section on Admission and Registration. In addition to these general requirements, 12 units of professional education are prerequisite for enrollment in all graduate courses.

**207. Educational Sociology** (3)

A study of the social, economic, political and moral setting in which present day American education functions. Prerequisite: Education 115A, or equivalent, teaching experience.

**220. Advanced Educational Psychology** (3) I, II

Advanced study of the research and its application to learning and human growth. Prerequisite: Educational Psych. 130, or equivalent, teaching experience.

**230. Guidance Problems in Secondary Education** (3) I, II

Individual and group study of the theory and practice of guidance with emphasis upon practical problems of the members of the class. Prerequisite: Education 155, or equivalent.

**232. Problems in Vocational Guidance** (3) I, II

To prepare teachers for vocational guidance in the secondary schools. Includes occupational information, vocational aptitude measurement, and educational guidance. Prerequisite: Education 230, or equivalent.

**233. Guidance Counseling Techniques** (3) I, II

Designed for school counselors. To stress the understandings and procedures necessary for effective interviewing. Prerequisite: Education 230, or equivalent.

**233B. Guidance Counseling Techniques** (3)
Continuation of the work of Education 233. Prerequisite: Education 230 and 233, or equivalents.

**237. Research in Guidance Problems** (1-3) I, II
Individual study by graduate students who have demonstrated exceptional ability and a need for such work. Admission by permission of the Director of Secondary Education and instructor.

**238. Field Work in School Guidance** (3)
Application of the principles and procedures in testing, counseling, and related personnel work in the public schools. Weekly seminar sessions with college and cooperating staff. Prerequisite: Permission of instructor and 12 units in guidance and related areas.

**239. Workshop in Pupil Personnel Services** (3) Summer
Application of principles and procedures to specific situations for improvement of pupil personnel services. Individual problems emphasized. Prerequisite: Teaching experience and permission of director of workshop.

**241. Problems in the Teaching of Arithmetic** (3)
A study of research and practice in the methods of teaching and in the curriculum of elementary and junior high school arithmetic. Prerequisite: Education 129 or equivalent.

**242. Problems in the Teaching of Reading** (3) I, II
Advanced study of trends in reading instructions. Topics include developmental sequences in reading skills and abilities, reading in the content fields, individual differences, and interests. Students will develop individual projects or problems. Prerequisites: Education 136 and 144 or equivalents.

**243. Seminar in Social Studies in Elementary Education** (3)
Advanced study of problems in teaching social studies in the elementary school with emphasis on the study of the scientific research in the field. Prerequisite: Permission of instructor.

**244. Seminar in Language Arts in Elementary Education** (3)
Advanced study of problems in teaching language arts in the elementary school, including spelling, literature and written and oral communication. Emphasis will be on the study of scientific research in the field. Prerequisite: Permission of instructor.

**245. Seminar in Elementary Education** (3) I, II
A study of the methodology of research with particular reference to the basic research in the psychology and teaching of the elementary school subjects. Prerequisite: 12 units in elementary education and permission of the instructor.

**250. Curricular Problems in Secondary Education** (3) I, II
Present status and development of the secondary school curriculum. Emphasis upon individual study and development of solutions of problems of the students. Prerequisite: 12 units in secondary education and permission of the instructor.

**252. General Education in the Secondary School** (3) Summer
A course designed for teachers in service. A study of the function and implementation of general education in the secondary school. Prerequisite: 12 units in secondary education and permission of the instructor.

**254. Advanced Problems in Secondary School Instruction** (3)
An analysis of the scientific research and philosophical principles in secondary school instruction. Prerequisite: Teaching experience and permission of instructor.

**256. Recent Trends in Secondary Curriculum** (3) I, II
Current practices and trends in secondary schools. Extensive individual work on related problems of interest to members of the class. Prerequisite: 12 units in secondary education and permission of the instructor.

**257. Workshop in Intercultural Education** (4)

A cooperaive workshop sponsored by the college and the San Diego City Schools to study trends in intercultural education in American schools, including units, curricular and instructional materials and techniques. Enrollment only by application to the Dean of Education.

**258. Research in Curricular Problems** (1-3) I, II

Individual study by graduate students who have demonstrated exceptional ability and a need for such work. Admission by permission of the Director of Secondary Education and instructor.

**260. Federal, State, County and City School Organization, Administration and School Law** (3)

A study of the organization, administration and supervision of federal, state, city and county school systems. Includes school finance, housing, law, and business administration.

**262. The Organization and Administration of Elementary Schools** (3)

A study will be made of the problems of personnel, local finance, curriculum, plant, community relations, and legal aspects of elementary schools. Required as a prerequisite to Education 266. Prerequisite: Teaching experience.

**263. The Organization and Administration of the Secondary School** (3)

Topics will cover all aspects of the duties of a secondary school administrator, including personnel, finance, curriculum, equipment and supplies, public relations, transportation, and law. Prerequisite: Possession of a valid General Secondary Credential and permission of the instructor.

**264. Elementary School Supervision** (3)

Principles and practices of supervision and methods of evaluating instruction and the curriculum in elementary education. Prerequisite: General Elementary Credential, teaching experience, Education 262, or equivalent, and permission of the instructor.

**265. Secondary School Supervision** (3)

For those who will be responsible for the supervision and evaluation of the curriculum and teaching methods in the secondary school. Prerequisite: Possession of a valid General Secondary Credential, teaching experience, and permission of the instructor.

**266. Field Work in Elementary School Administration and Supervision** (2) I

Study of the administration and supervision of an elementary school, for the Elementary School Administration and Supervision Credentials. Field project required of all students under the direction of a college staff. Prerequisite: Education 262 or 264, or equivalent.

**267. Field Work in Secondary School Administration and Supervision** (2) II

Study of practices as they are found in secondary schools relative to administration and supervision; to insure direct contact with existing programs and procedures through faculty guided projects. Prerequisite: Education 263 or 265, or equivalent.

**268. Seminar in School Administration** (3) Summer

An intensive study of selected problems in finance, business administration, and other topics in the field of school administration. Provision will be made for individual work on special topics of interest to students.

**270. School Finance and Business Administration** (3)

A study of public school finance at state and local levels, and an analysis of public school business administration procedures in elementary and secondary school districts. Includes study of state school law. Prerequisite: Valid Elementary or Secondary Credentials.

**274A. Utilizing Audio-Visual Materials in the Classroom** (3) I

A critical analysis of research evaluating the use of visual, auditory, and other sensory materials in education. Prerequisite: Education 174, or equivalent.

**275. Administering the Use of Audio-Visual Materials** (3) II

Organizing, supervising, and coordinating audio-visual centers as an integra part of educational systems. Prerequisite: Education 174, or by permission of th instructor.

**278. Educational Leadership** (3)

An analysis of the factors and practice in procedures of group and individua leadership in four areas: (a) the community; (b) the teaching staff; (c) the studen personnel; (d) the professional field of educational administration and supervision Prerequisite: Permission of the instructor.

**290. Procedures of Investigation and Report** (2-3) I, II, Summer

Emphasizes procedures in selecting and writing a project or thesis. Methods of investigation and reporting data. Extensive survey of an area of professional literature to analyze techniques and style. Separate sections for elementary and secondary levels

**298. Special Study** (1-3)

An individual study course designed primarily for candidates for the master's degree.

**299. Thesis**

Guidance in the preparation of a project or thesis for the master's degree.

**316. Directed Teaching** (3-3) I, II

Systematic observation, participation, and teaching under supervision in an affiliated high school. Thirty clock hours of student teaching will usually earn one unit of credit, but the credit finally allowed will depend upon the nature and quality of the teaching done. Any work below a C grade is unacceptable for credit in this course.

No student can enroll in this course until he has completed at least 10 units of work in education.

During the semesters in which the student takes his assignments in student teaching, he must meet with the college supervisor one hour each week for conference and discussion of problems encountered in his teaching.

Students who have had student teaching in preparation for the junior high school or special secondary credential should confer with their departmental and educational advisers concerning partial fulfillment of this requirement as the result of having completed the student teaching required for the credentials mentioned above.

# ENGINEERING

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in engineering. Lower division requirements. Physics 4A-4B-4C; Mathematics 3A-3B, 4A-4B; Chemistry 1A-1B, Engineering 21, 23, or their equivalent. Upper division requirements: A minimum of 24 upper division units including the group required of all engineering students as outlined in the Engineering Curriculum in the section entitled: Preprofessional and Vocational Curricula.

A *teaching major* is not offered in engineering.

### Minor

A *minor in arts and sciences* is offered in engineering. The minor must include at least 15 units in engineering, nine units of which must be from courses carrying upper division credit. The courses selected must be a logical sequence approved by faculty adviser.

A *teaching minor* is not offered in engineering.

### Lower Division Courses

NOTE: Courses in engineering may not be used to meet any part of the lower division natural science requirement, nor may they be used as part of a physical science major or minor.

**1A-1B. Plane Surveying** (3-3) Year, I

Two lectures and one three-hour field period per week. Semester I: Use, care and adjustment of surveying equipment. Introduction to standard procedures and techniques. Prerequisites: Engineering 2, or equivalent, Math. D, and sophomore standing. Semester II: Computations and map making; land, topographic, and city surveying. Prerequisite: Engr. 1A.

**2. Mechanical Drawing** (3) I, II

Freehand lettering, use and care of drafting equipment, simple orthographic projection, introduction to problems of dimensioning. Open to students lacking credit for a year course in senior high school mechanical drawing. Not open to students with credit for Industrial Arts 2.

**21. Descriptive Geometry** (3) I

Fundamental principles of descriptive geometry and their application to engineering problems. Solutions of point, line and plane problems; curved lines and surfaces; intersections of surfaces. One lecture and two three-hour laboratory periods per week. Prerequisite: Engr. 2, or equivalent, and sophomore standing.

**22. Machine Drawing** (3) II

Standard drawing methods and procedures, complete sets of working drawings of simple machine parts, gears and cams; includes tolerance dimensioning, sectioning, threads and fasteners. One lecture and two three-hour laboratory periods per week. Prerequisites: Engr. 21, Math. 3A-3B.

**23. Materials of Construction** (2) II

A concise presentation of the physical properties of the common materials used in structures and machines, with brief descriptions of their manufacture and fabrication. Two lectures per week. Prerequisite: Sophomore standing.

## Upper Division Courses

**100A-100B. Elements of Electrical Engineering** (3-3) Year, I

Theory and characteristics of electrical equipment with emphasis on industrial applications. Lectures and problems. Semester I: Direct current circuit analysis. D. C. motors and generators. Introduction to alternating current circuits. Prerequisites: Math. 4A, Physics 4B, or permission of the instructor. Semester II: Alternating current circuit analysis. Transformers, alternators, induction and synchronous motors, conversion apparatus, and transmission lines. Prerequisite: Engr. 100A.

**101A. Electrical Engineering Laboratory** (2) I

Laboratory determination of the characteristics of direct current machinery and circuits, single phase alternating current circuits. One three-hour lab. and report per week. Prerequisite: Engr. 100A, or taken concurrently.

**101B. Electrical Engineering Laboratory** (2) II

Laboratory determination of the characteristics of single phase and polyphase circuits, machines, and related equipment. One three-hour laboratory period and report per week. Prerequisite: Engr. 100B, or taken concurrently.

**102A-102B. Analytical Mechanics** (3-3) Year, I

Lectures and problems. Emphasis on engineering applications. Semester I: Principles of statics which deals with the conditions of equilibrium of bodies acted upon by forces. Prerequisites: Physics 4A-4B, Math. 4A. Semester II: Principles of dynamics which deals with the fundamentals of rectilinear and curvilinear motion of particles and rigid bodies, and the rotation of rigid bodies. Prerequisite: Engr. 102A.

**104. Communications** (3) II

Power amplifiers, oscillators, modulators and detectors. Radio transmitters and receivers for amplitude modulation and frequency modulation. Television systems. Antennas and radio wave propagation. Prerequisite: Physics 102 or permission of the instructor.

**105. Hydraulics** (3) II

A general course in hydraulics including the fundamental principles of hydrostatics and hydrodynamics stressing design considerations of orifices, weirs, piping systems and canals. Prerequisites: Math. 4A, Physics 4A, Engr. 102A.

**106. Hydraulics Laboratory** (2) II

Laboratory determination of the characteristics of fluid flow through pipes, orifices, weirs; characteristics of various types of hydraulic machinery. One three-hour laboratory period and report per week. Prerequisite: Engr. 105, or taken concurrently.

**122. Machine Design** (4) I

Individual design of a useful machine encampassing fundamental considerations of simple machine parts. Practical design methods utilizing professional literature are stressed. Three lectures and one three-hour laboratory period per week. Prerequisites: Engr. 23, 102A, 140.

**124. Radio Measurements** (2) II

A laboratory course on measurements of the parameters of resonant circuits at radio frequencies. Study of the properties of oscillators, modulators, detectors and wave guides. Prerequisite: Previous or concurrent enrollment in Engineering 104. Students with credit in Physics 124 may not receive credit for this course.

**128. Applied Engineering Thermodynamics** (3) I

The fundamental theory and principles of heat power engineering; the various types of heat power equipment and their operation, the practical application of basic theory to efficient operating practices is stressed. Prerequisites: Math. 4A, Physics 4B.

**129. Heat Power Laboratory** (2) I

Testing of steam generators and heat balance of same; steam turbine; reciprocating engine; internal combustion engines for heat balance; flue gases, fuel oils, lubricating oils and boiler feed water. Emphasis upon standard operating procedures. One three-hour laboratory period per week. Prerequisite: Engr. 128, or taken concurrently.

**130. Route and Construction Surveying** (3) I

Application of surveying to engineering problems. Methods of route surveys for highways, railroads, utilities. Construction surveys for buildings and other structures. Earthwork computations. Two lectures and one three-hour field period per week. Prerequisite: Engr. 1B.

**131. Advanced Surveying** (3) II

Special problems in surveying. Methods of geodetic surveying, map projections, U. S. public land surveys, and photogrammetry. Two lectures and one three-hour field period per week. Prerequisites: Astr. 3 (may be taken concurrently) and Engr. 1B.

**140. Strength of Materials** (3) II

Elastic properties and strength of engineering materials. Analysis of types of failures. Stress analysis and deformation of simple structural and machine members. Photoelasticity. Lecture and problems. Prerequisite: Engr. 102A.

**141. Materials of Engineering Laboratory** (2) II

Theory and operation of testing machines and auxiliary apparatus. Conduct of tests to determine significant characteristics of commonly used engineering materials. Included are heat treatment of metals, metallographic tests, and photoelasticity. One three-hour laboratory and report per week. Prerequisite: Engr. 140, or taken concurrently.

**142. Stress Analysis** (3) I

Determination of stresses in trusses, beams, and frames. Combined stresses; space structures; general theorems relating to elastic systems; statically indeterminate structures; deflections; analytical and graphical methods of solution. Lectures and problems. Prerequisites: Eng. 102A-102B, 140.

**145. Internal Combustion Engines** (3) II

Application of theory of thermodynamics to internal combustion engines. Essential features of design, operating characteristics, and application of gasoline, diesel, and gas engines, and the gas turbine. Lectures and problems. Prerequisites: Physics 4C, Math. 4A. Recommended: Engr. 128.

**150. Industrial Electronics** (3) II

Photoelectricity and its applications; rectification and inversion; theory and applications of thyratrons and ignitrons including welding; radio-frequency heating; electrostatic precipitation; motor control and introduction to servomechanisms. Prerequisite: Physics 102.

**156. Aerodynamics** (3) II

Mechanics and thermodynamics of air; wing characteristics; drag; wind tunnel testing technique; propellers and power plants; aircraft performance; stability and control. Introduction to compressible aerodynamics. Lectures and problems. Prerequisites: Engr. 102A-102B.

**199. Senior Report** (2) I, II

Investigation of specific problems of advanced nature. Preparation of report. Prerequisite: Advanced senior standing.

NOTE.—In laboratory courses special emphasis is placed upon the preparation of neat, concise, complete and intelligent reports.

# ENGLISH

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in English. Lower division requirements: At least 15 units of work, including English 1 or 41, and 12 units of electives, of which six must be in a year course. Upper division requirements: A minimum of 24 upper division units in English and comparative literature, selected with the approval of a departmental representative; two years of lower division work in a foreign language or the equivalent reading knowledge of a language as determined by examination.

Prospective majors of sophomore standing may, with the consent of the course instructor, and subject to general college regulations (credit for Upper Division and Graduate Courses is in section on Announcement of Courses), substitute six units of upper division electives for six units of required lower division work, such upper division units to be selected from the following: English 116A, 116B, 118A, 118B, 119A, 119B, 126A, 126B, 101A, 143A, 143B.

Students of Junior or Senior standing may substitute for any deficiencies in lower division requirements in English (except English 1) an equivalent number of units of upper division courses selected from the following: English 151, 116A, 116B, 120, 118A, 118B, 119A, 119B, 126A, 126B, 101A, 143A, 143B, 159.

A *teaching major* is offered in English for the general secondary or junior high school credential. For specific information, refer to the outlines of requirements for these credentials. English majors who have been admitted to candidacy for the general secondary credential may satisfy the foreign language requirement by one year of lower division foreign language, or equivalent, if 9 units of professional education units have been completed.

### Minor

A *minor in arts and sciences* is offered in English. The minor must include at least 15 units of work in English, including English 1 or 41, and at least 12 units of electives, of which nine must be from courses carrying upper division credit.

A *teaching minor* is offered in English for the general secondary, the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Comparative Literature

For courses in world literature, giving credit toward the English major or minor or toward the Comparative Literature minor, see Comparative Literature.

### Credit in Course Sequences

All elective year courses in the department may be begun in either semester, and either semester may be taken for credit.

## Lower Division Courses

**A. English Fundamentals** (2) I, II

The elements of composition, including drill in grammar and usage; exercises in vocabulary building and in fundamental reading skills; theme writing. Credit in this course is equivalent to passing the English A examination and may be counted toward graduation as an elective but not to satisfy lower division English requirements in any curriculum.

**R. Reading Laboratory** (0) I, II

A semi-tutorial service offered by the English Department to those wishing to improve reading ability, or secure individual help with study problems. Open to all students at any level of college work. Consult department chairman.

**W. Writing Laboratory** (0) I, II

A semi-tutorial service offered by the English Department to those wishing assistance in writing projects, either remedial or advanced. Open to students at any level of college work. Consult department chairman.

**1. Freshman Composition** (3) I, II

Study and practice in the expression of ideas and factual materials; principles of organization and of effective style, with emphasis on exposition. Prerequisite: Satisfactory English A examination or credit in English A.

**2. Freshman Literature** (3) I, II

A course designed to develop college reading skills through practice in the analysis of materials at varying levels of difficulty. Prerequisite: English 1 or 8.

**6A-6B. The Study of Literature** (3-3) Year, I

A basic course in reading imaginative literature with insight and vividness. Methods of developing an informed and trained critical attention to literary works, motion pictures, and radio presentations.

**8. English in Business** (3) I, II

Theory and practice of business correspondence. Business letters as applied to salesmanship; problems in writing credit and collections letters, applications for employment, adjustment letters, and sales letters. Prerequisites: English A, Cross English Test and Commerce 2A or its equivalent. (A satisfactory score on the college entrance English test may be substituted for English A.)

**10. Recreational Reading** (1) I, II

Development of personal tastes for leisure-time reading through lectures and written reports. May be taken a second time with new materials.

**50A-50B. Survey of American Literature** (3-3) Year, I

Semester I: Major American writers from the beginning to 1860. Semester II: American literature from 1860 to the present.

**52A-52B. Masterpieces of World Literature** (3-3) Year, I

A chronological survey from Homer to modern times. The first semester stresses the classical epic and tragedy. The second semester, beginning with the Renaissance, stresses prose fiction, the drama, and the essay. Not open to students with credit for Comparative Literature 52A-52B.

**56A-56B. Survey of English Literature** (3-3) Year, I

The study of some important works of English literature from the Anglo-Saxon period through the Victorian age, with emphasis upon the literary history of each period.

**60A-60B. Literature and Personality** (3-3) Year, I

The close study of a limited number of the great creators of literature. The goal of the course is to derive, from markedly different specific works, orderly and generalized methods for the interpretation of great literature.

**61. Sophomore Composition** (3) I

An elective course designed to give further training to the student who wishes practice in writing beyond the freshman level. Prerequisites: English 1 and English 2, or equivalent.

**62. The Short Story** (3) II

A practical course in writing, including a study of short story techniques and purposes, and the writing of complete short stories. Prerequisites: English 1 and English 2, or equivalent.

**63. Foundations of the Language** (3) II

A study of the important features of English grammatical structure, with emphasis on present-day usage. Designed to make more significant the native language through a study of the elements which compose it.

### Upper Division Courses

**106. Creative Writing** (3) I

A writing workshop in which students are given opportunity to criticize each other's work. Emphasis on narrative and description, but freedom to pursue whatever writing forms may interest the student most. May be taken a second time with new material.

**110. Recreational Reading** (1) I, II

An advanced course in the group reading of modern drama, poetry and fiction.

**113. American English** (3) I (Offered in 1951-52)

The development of American English; regional and cultural differences in pronunciation, grammar, and vocabulary.

**116A-116B. The Age of Elizabeth** (3-3) Year, I

Semester I: Poetry and prose, exclusive of drama. Semester II: The drama to 1642, excluding Shakespeare.

**117A-117B. Shakespeare** (3-3) Year, I

The first semester gives special emphasis to the histories and comedies; the second, to tragedy and the dramatic romances.

**118A-118B. Eighteenth Century English Literature** (3-3) Year, I

The first semester emphasizes the social satire of Swift, Pope, Addison, Steele, Dryden, Gay, Prior; and also the first stirrings of the romantic revolt in a number of important poems and prose works. The second semester is devoted to Johnson and Boswell and their circle and to a significant romantic literature antedating the romantic outburst.

**119A-119B. Nineteenth Century English Poetry** (3-3) I

Semester I: The culmination of the romantic movement in the poetry of Wordsworth, Coleridge, Byron, Shelley, and Keats, in relation to the thought of the revolutionary period. Semester II: Tennyson and Browning with their contemporaries and successors, relating English poetry to nineteenth century life and thought.

**120. The Age of Milton** (3) II

A study of the literature of the earlier seventeenth century, with emphasis on Jonson, Donne, and Milton. Consideration is given to the political, religious, and social backgrounds of the seventeenth century.

**126A-126B. Nineteenth Century English Prose** (3) I

Semester I: Romantic and mid-Victorian prose writers, including Coleridge, Hazlitt, Lamb, DeQuincey, Carlyle, Landor, Macaulay, and Mill, related to the literary, political, and social movements of the period. Semester II: Late nineteenth century essays of Arnold, Thomas Huxley, Newman, Pater, Ruskin, and Stevenson. Study of scientific, aesthetic, and ethical backgrounds.

**129. Contemporary British Literature** (3) II

Selected prose and poetry of England and Ireland from 1914 to the present, including Shaw, Yeats, Synge, Joyce, Maugham, Huxley, D. H. Lawrence, Eliot, the Oxford poets, and the principal authors belonging to the two wars.

**131. American Literature: 1820-1860** (3) I

The study of the important romantic writers, with emphasis on the New England group.

**132. The Frontier and American Literature** (3) I, II

The influence of the frontier upon American literature studied through various regions and movements. Examinations of source materials, biographies, and representative writers.

**133. American Literature: 1860-1910** (3) II

The rise of realism in American literature. Influences, foreign and native, which promoted the movement. Definition of realism. The literary creed of the realists. The romantic attack and the realist defense.

**134. American Literature: 1910 to the Present** (3) I, II

Ideas and forms in representative poetry and prose.

**135. American Colonial and Revolutionary Literature** (3) I

The Puritan system of thought and way of life, and the literary and intellectual movements of the eighteenth century, studied in the works of such representative writers as Mather, Franklin, Paine, Freneau, and Brockden Brown.

**143A-143B.** (3-3) Year, I

The history of the English novel from its beginnings to the present century. Emphasis in the first semester will be on the eighteenth century and in the second semester on the nineteenth century.

**149. The Study of Poetry** (3) II

A course proceeding from simpler to more complex poetic productions, and designed to bridge the widening chasm between the poet and the ordinary man. Emphasis on current directions in poetry, and on poetry as an oral and auditory art.

**151. Chaucer** (3) I

A study of Chaucer's works, with emphasis on "The Canterbury Tales" and "Troilus and Criseyde."

**152A-152B. Survey of Drama.** (3-3) Year, I

Study of selected tragedies and comedies from Asiatic, European, English, and American literature, with emphasis upon the human problems depicted therein and upon the timelessness of certain themes, such as those of Electra and Medea. Lectures, discussions, and reports on readings. Not open to students with credit for Comparative Literature 152A-152B.

**162. Magazine Fiction** (3) I

Coaching in constructing and writing short stories for commercial publications. Admission by consent of the instructor.

**166. Honors Course** (3) I, II

Special study open to members of the Honors Group in English (see The Honors Group under General Regulations). May be repeated with different materials.

**191. Advanced Composition** (3) I

A course designed for prospective teachers of secondary school English. This is not a methods course, but a content course in grammar, composition, and journalism. Required of all teaching majors in English; open to other students as an elective.

**192. The English Language** (3) II

The study of the history of the English language, of its words and structure, of the changes in inflections, pronunciation, vocabulary, and meaning, and of its use as an instrument of communication and human living. Open only to seniors and graduate students.

**195. Literary Criticism** (3) I

A historical survey of the principles and practices of literary criticism from Greek times to the nineteenth century. Readings in the works of Aristotle, Horace, Longinus, Sidney, Boileau, Dryden, Lessing, Sainte-Beauve, Coleridge, and Arnold. Open only to senior and graduate students.

**199. Special Problems** (1-3) I, II

Students who have demonstrated ability in literary studies may enroll for work other than that outlined in the regular courses. Admission only by permission of the instructor with whom the work is to be done.

### Graduate Courses

**203A-B-C-D. The Critical Study of a Major Author** (2-2-2-2) I, II
A seminar in (A) Shakespeare, (B) Arnold, (C) Mark Twain, or (D) Emerson.

**213A-B-C-D. The Study of a Cultural Period Through Its Literature** (2-2-2-2) I, II
A seminar in (A) the Renaissance, 1500-1660, (B) the Enlightenment, 1660-1780, (C) The Romantic Revolution, 1780-1830, or (D) Industrialism and Democracy, 1830-1914.

**223A-B-C-D. The Study of a Literary Problem** (2-2-2-2) I, II
A seminar in (A) Regionalism in American Literature, (B) the Utopian Theme in Literature, (C) the Idea of the "Gentleman," or (D) European Influences in American Literature.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)
An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

## FRENCH

### IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in French. Lower division requirements: French, 1, 2, 3, 4, 5, 6; German 1, 2, or Spanish 1, 2, or Latin 1, 2; History 4A-4B. Upper division requirements: A minimum of 24 upper division units, at least 21 units of which must be in French, including French 199. The remaining 3 units may be selected from Geography 118; History 121A-121B, 131A-131B, 141, 142, 143A-143B, 144A-144B; or Comparative Literature 101A, 140A-140B, 152A-152B, 155, 158, 159, in consultation with the Chairman of the Department. An average of C grade or better is required in upper division major courses.

A *major in arts and sciences* is offered in Romance Languages. For specific information, refer to Romance Languages in the section on Announcement of Courses.

A *teaching major* is offered in French for the general junior high school credential. For specific information, refer to requirements for this credential.

### Minor

A *minor in arts and sciences* is offered in French. The minor must include at least 15 units of work in French, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in French for the general secondary, the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credential. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1. Elementary** (3) I, II
Pronunciation, oral practice, readings on French culture and civilization, minimum essentials of grammar.

**2. Elementary** (3) I, II
Continuation of French 1. Prerequisite: French 1 or one year of high school French.

**3, 4, 5, 6.** Will take place of French C, D, in the fall semester of 1951.

**10. Conversation** (2) I

Practice in the spoken language; practical vocabulary, conversation on assigned topics; simple dialogues and plays. Prerequisite: French A or two years of high school French.

**11. Conversation** (2) II

Continuation of French 10. Prerequisite: French 10, French B, or three years of high school French.

**15. French Civilization** (2) I

The major currents and characteristics of French culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

**16. French Civilization** (2) II

Continuation of French 15. No prerequisite.

**B. Elementary** (5) I (Offered for last time in Fall of 1950)

Intensive study of French grammar and syntax; daily written work discussed in class; class drill in conversational idiom and pronunciation; reading with oral discussion and resumes; diction; introduction to contemporary prose writers. Students who have had two years of French in high school should register for French B for which only four units will be allowed. For specific information, consult the chairman of the department.

**C-D. Intermediate Reading** (3-3) Year, I (Offered for last time in Spring of 1951)

Reading and composition; study of standard prose as a basis for class work, collateral reading with résumés and written reports; dictation. Prerequisite for C: French B or three years of high school French. Prerequisite for D: French C or four years of high school French.

**SC. Scientific Reading** (2) II

Reading taken from the fields of chemistry, physics, medicine, zoology, biology, etc. Outside readings of books and periodicals, with written reports. Prerequisite: French B or equivalent.

### Upper Division Courses

**101A-101B. Conversation and Composition** (3-3) Year, I

Translation into French from moderately difficult English prose. Outside reading of modern French prose, with written reports in French monthly. Readings and oral discussions in French of various facets of French life and culture.

Prerequisite: French D, or its equivalent, with grade of C.

**105A-105B. Modern French Drama** (3-3) Year, I (Offered in 1953-54)

Plays of Victor Hugo, de Vigny, de Musset, Scribe, Augier, Dumas fils, Pailleron, Brieux, Hervieu, Maeterlinck, Rostand, and others read and discussed as to subject matter and technique. Outside reading and reports. Prerequisite: French D, or its equivalent, with grade of C.

**107A-107B. Eighteenth Century Literature** (3-3) Year, I (Offered in 1952-53)

The works of Montesquieu, Voltaire, Rousseau, the Encyclopédistes, and others. Prerequisite: French D, or its equivalent, with a grade of C.

**110A-110B. Modern French Novel** (3-3) Year, I (Offered in 1951-52)

The French novel from Victor Hugo to the present day, including such authors as: Hugo, Dumas, Stendahl, Balzac, Flaubert, Loti, Anatole France, Bourget, Bordeaux, Bazin, Barrès, Romain Rolland, A. Gide, Marcel Proust, and others. Class reading, outside reading, and reports. Prerequisite: French D, or its equivalent, with grade of C.

**111A-111B. Seventeenth Century Dramatic Literature** (3-3) Year, I

Reading in class of plays of Molière, Corneille, and Racine. Outside readings and lectures on the background of the seventeenth century in France. Prerequisite: French D or its equivalent, with a grade of C.

**199. Comprehensive Reading and Survey Course** (3) II

Designed to fill up the gaps in the reading done in courses. Class meeting once a week for guidance, reports, and quizzes. Required of all seniors majoring in French.

# GENERAL LANGUAGE

## IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in general language.

### Lower Division Courses

**20. Latin and Greek Word Derivation** (3) I

A general and elementary course in philology. A study of Latin and Greek roots of most frequent occurrence in English, and of the English words derived from them. No prerequisite.

**30. Pronunciation of French, Italian and German** (1-3) II

A course designed especially for the use of singers, radio announcers, etc. No prerequisite. This course may be taken for one, two or three units of credit depending on the individual student's need. Credit in this course does not count toward the 6-unit foreign language requirement.

# GEOGRAPHY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in geography. Lower division requiements: Geography 1, 2; Geology 1A-1B. Recommended: A reading knowledge of French or German. Upper division requirements: A minimum of 24 upper division units in geography, or 18 units in geography and 6 units selected from related fields with approval of the departmental representative.

A *teaching major* is not offered in geography; however, courses in geography may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines for requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in geography. The minor must include at least 15 units of work in geography, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in geography for the general secondary credential; however, it may be used as a part of the *social science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to requirements for these credentials.

### Lower Division Courses

NOTE.—Geography 1 or 3 may not be used to meet any part of the 12-unit social science requirement. Geography 1 or 3 (but not both) may be used to meet part of the 12-unit natural science requirement.

**1. Introduction to Geography: Physical Elements** (3) I, II

The nature of maps, weather and climates of the world; natural vegetation; land forms and their associated soils, with reference to their climatic relationships; the seas and their coasts. One field trip. This course is classified as a natural science. (See lower division requirements.)

**2. Introduction to Geography: Natural and Cultural Regions** (3) I, II

The regional differentiation of the world by human activity; areal bases of economy and nationality. Prerequisite: Geography 1.

**3. Elementary Meteorology** (3) I, II

An elementary study of the earth's atmosphere and changes in it which produce our weather and influence human affairs. Special attention given to local conditions, instruments, and records. Aeronautical meteorology stressed in the fall semester. This course is classified as a natural science. (See lower division requirements.)

**10. Economic Geography** (3) I, II

Beginning course in economic geography designed for commerce and economic majors. Prerequisite: Geography 1.

## Upper Division Courses

**112. Geography of California** (3) II

The physiographic regions of California and the cultural landscapes developed by the successive cultural groups. Prerequisite: Geography 1 or consent of instructor.

**113. Climatology** (3) I (Not offered in 1950-51)

A survey of the principal classifications of climates of the world; regional characteristics of climate; relations to soils, vegetation, and human activities. Prerequisite: Geography 1 or consent of instructor.

**117. Geography of Northern and Eastern Europe** (3) I

A study of the cultural development of the countries of northern and eastern Europe in relation to physical background and historical evolution. Prerequisite: Geography 1 or consent of instructor.

**118. Geography of the Mediterranean Area** (3) II

A study of the cultural development of the countries of Southern Europe, Western Asia, and North Africa in relation to physical background and resources. Prerequisite: Geography 1 or consent of instructor.

**119. Geography of South America** (3) II

A study of the physical regions and human geography of South America, including a review of the history of colonization and the exploitation of resources. Prerequisite: Geography 1 or consent of instructor.

**120. Geography of Middle America** (3) I

A study of the physical and human geography of Mexico, Central America, and the islands of the Caribbean, including a review of the history of colonization and the exploitation of resources. Prerequisite: Geography 1 or consent of instructor.

**121. Geography of North America** (3) II

The natural regions of North America, their formation and economic and historical development. Prerequisite: Geography 1 or consent of instructor.

**124. Geography of Asia** (3) I

The cultural regions of Asia, their physical environment, and historical development. Prerequisite: Geography 1 or consent of instructor.

**135. Geography of the San Diego Area** (3) II

Directed individual urban and rural field work in the San Diego area; the mapping of a small area and making its geographic interpretations. Prerequisite: Geography 1 and 2 or consent of instructor.

**141. Advanced Economic Geography** (3) I

A survey of the raw materials of world trade; their production and distribution as related to major geographic regions of the world. Prerequisite: Geography 1 or consent of instructor.

**145. Conservation of Natural Resources** (3) II

Nature and extent of mineral, soil, water, forest, and wild life resources and their conservation; with particular emphasis on the United States, against a general background of world resources. Conservation philosophies and practices, and their geographic bases. Prerequisite: Geography 1 or consent of instructor.

**166. Honors Course** I, II (Credit to be arranged)

To be arranged after consultation with the chairman of the department. (See the Honor Group).

**199. Special Studies** (1-3) I, II

### Graduate Courses

**200A-200B. Seminar** (2-2) Year, I

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)

An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

# GEOLOGY

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is not offered in geology. Students preparing for later professional training in geology should plan on completing Chemistry 1A-1B; Physics 4A-4B-4C; Mathematics 3A-3B; Engineering 1A-1B, 21A; and Geology 1A-1B, 21A-21B.

A *teaching major* is not offered in geology; however, courses in this field may be used as part of the *general science major* for the general junior high school credential. For specific information, refer to the outline of requirements for this credential.

### Minor

A *minor in arts and sciences* is offered in geology. The minor must include at least 15 units of work in geology, nine units of which must be from courses carrying upper division credits.

A *teaching minor* is not offered in geology; however, courses in this field may be used as part of the *general science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A. Physical** (4) I

The composition, origin, and distribution of earth materials, and their modification through mechanical and chemical process of change. Three lectures and one three-hour laboratory period weekly with related field study during the semester. (Not open to students who have had Geology 2A except for one unit upon the completion of the laboratory section.)

**1B. Historical** (4) II

Theories of earth origin, and the evolutionary history of the earth as traced through rock and fossil records. Consideration of the Paleontologic Sequence. Three lectures and one three-hour laboratory period weekly, with arrangement for field study and conference during the semester. Prerequisite: Geology 1A or equivalent.

**2A. General** (3) I

Similar to Geology 1A but without laboratory. Emphasis upon origin and development of earth's surface features. Open to all students except those already presenting credit in Geology 1A. Two lectures and one demonstration and discussion hour weekly.

**2B. Physiography of United States** (3) I

A study of the land forms of the United States and their physiographic history as illustrative of universal geologic conditions. Two lectures and one discussion hour weekly. Prerequisite: Geology 1A or 2A.

**21A-21B. Mineralogy** (3-3) Year, I

Study of the common minerals and rocks. Use of the blowpipe, simple chemical reagents, and the petrographic microscope, but with emphasis upon sight determination. Prerequisite: High school chemistry, or equivalent.

### Upper Division Courses

**100. Structural Geology** (3) I

The evolution and description of the structural and topographical features of the earth. Faulting, folding, and orogenic forces with practical illustrations from the North American Continent and California geologic conditions. Lectures, discussions, and occasional field trips. Prerequisite: Geology 1A-1B or 2A-2B.

**101. Museum Work** (1-2) I, II

Selection and preparation of materials for the college museum collections. Emphasis upon creation of self instructive displays for use on the elementary and secondary as well as the collegiate level. Prerequisite: Geology 1A-1B, and consent of the instructor.

**102. Geology of California** (2) II

Directed reading and group discussion of California geologic literature. Designed to acquaint the student not only with the important structural and geomorphic units of the State but with the variety of important source materials of geologic literature as well. Use of bibliographies, state and federal surveys, research publications, etc. Prerequisite: Geology 1A-1B, and consent of the instructor.

**108. Field Geology** (1-4) I, II

Field instruction in geologic methods. Reconnaissance of adjacent unmapped areas with preparation of a geologic map and accompanying report. Work accomplished primarily on week-ends with minimum classroom activity during the week for organizational details. Prerequisite: Geology 1A-1B, and consent of the instructor.

**199. Special Study** (1-2) I, II

Individual work in field, library, laboratory, or museum under staff supervision. Open only to qualified students upon consultation.

## GERMAN

### IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in German; however, students desiring to carry advanced work in German should consult with the Chairman of the Department of Foreign Languages.

### Lower Division Courses

**1. Elementary** (3) I, II

Pronunciation, oral practice, readings on German culture and civilization, minimum essentials of grammar.

**2. Elementary** (3) I, II

Continuation of German 1. Prerequisite: German 1 or one year of high school German.

**3, 4, 5, 6.** Will take the place of German C, D, in the Fall semester of 1951.

**10. Conversation** (2) I

Practice in the spoken language; practical vocabulary; conversation on assigned topics; simple dialogues and plays. Prerequisite: German A or two years of high school German.

**11. Conversation** (2) II

Continuation of German 10. Prerequisite: German 10, German B or three years of high school German.

**15. German Civilization** (2) I

The major currents and characteristics of German culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

**16. German Civilization** (2) II

Continuation of German 15. No prerequisite.

**B. Elementary** (5) I (Offered for last time in Fall of 1950)

Pronunciation, reading and grammar, with practice in simple conversation, narration and description, both oral and written. Students who have had two years of German in high school should register for German B for which only 4 units will be allowed. For specific information, consult the chairman of the department.

**C-D. Intermediate Review and Reading** (2-2) Year, I
(Offered for last time in Spring of 1951)

Reading and composition; study of standard prose as basis for class work; collateral reading with written reports; German conversation, with texts read as a basis; dictation. Prerequisite for C: German B or three years of high school German. Prerequisite for D: German C or four years of high school German.

**SC-SD. Scientific Reading** (3-3) Year, I

First semester, readings in scientific reader on chemistry, physics, etc.; occasional written reports on scientific subjects read outside of class; sight reading. Second semester, readings in special scientific or technical works; weekly written reports required; sight reading. Prerequisite for SC: German B with a grade of C or three years of high school German; for SD: German SC, German C, with a grade of C, or four years of high school German.

### Upper Division

**101A-101B. Advanced Conversation and Composition** (3-3) Year, I
(Not offered 1950-51)

Translation into German of moderately difficult English prose. Free composition in German, written and oral. Outside reading of modern German plays and prose, dealing with various aspects of German life and culture, with written reports and oral discussions in German. Oral and written practice in conversational German. Prerequisite: German D, or equivalent, with grade of C.

## HEALTH EDUCATION

### IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

Major is not offered in health education.

### Minor

A *minor in arts and sciences* is offered in health education. The minor must include at least 15 units of work, nine units of which must be from courses carrying upper division credit. Courses will be determined in consultation between student and departmental representative.

A *teaching minor* is offered in health education for the general secondary, the general junior high school, and the special secondary credentials. Physical education majors may use health education as a second teaching minor only. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**21. Principles of Healthful Living** (2) I, II

An approach to the personal health problems of college students. Scientific health information is provided, and an attempt is made to promote wholesome attitudes and desirable practices relating to healthful living. Required of all freshmen.

**65. Community Health** (3) I, II

Community health problems; the role of the citizen, of the public, and of community health agencies in promoting and protecting the health of the community.

**90. Physiology of Reproduction** (1) I, II

A series of lectures and discussions dealing with normal and abnormal physiology and anatomy of reproduction; facts and frauds in sex hygiene, and related topics.

### Upper Division Courses

**151. Health Education for Teachers** (2) I, II

The teacher's function in the different aspects of the school health program; environment, services, and instruction. Special attention is given to materials and material sources, and to community relationships and resources. Separate elementary and secondary sections.

**152. Health Education Programs** (3) I

The construction of the health education program including objectives, scope and sequence of instruction, teaching methods, source materials and evaluation procedures; practice in building instructional units.

**153. Administration of the School Health Program** (3) II

Administrative responsibilities and procedures in organizing and conducting the school health program. Principles, policies, and practices involved in instruction, service, environment, and community relationships. Partially fulfills Health and Development Credential requirement for nurses.

**199. Special Study in Health Education** (1-3) I, II

Extensive review of pertinent literature, individual research, and advanced study of problems in the profession. Credit will range from one to three units according to the type and amount of work. Approval of the Department Chairman required.

### Graduate Courses

**202. Problems in Health Education** (2) I, II

Current problems in Health Education, studied through a review of the literature, discussion of trends, observation of school situations, together with the analysis and evaluation of actual problems. Written reports required.

## HISTORY

### IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in history. Lower division preparation for the major: History 4A-4B, or 8A-8B, or 9A-9B, and either Political Science 1A-1B, or 71A-71B, or Economics 1A-1B. Two of the above history courses are recommended for students planning to major in history, and it is suggested that History 4A-4B be included as one of them. No freshman shall enroll in more than one lower division course in history during any one semester without the permission of the department. Upper division requirements: A minimum of 24 upper division units in history, including History 199, and a minimum of a year of concentration in each of three of the following fields: (a) Ancient and Medieval; (b) Modern Europe; (c) United States; (d) Latin America; (e) Pacific Area and the Far East. These courses must be selected under the guidance of the chairman of the department. A reading knowledge of one foreign language is strongly recommended.

A *teaching major* is offered in history for the general secondary credential. History may also be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in history. The minor must include at least 15 units of work in history, nine units of which must be from courses carrying upper division credit including a year course.

A *teaching minor* is offered in history for the general secondary credential or as part of the *social science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

## Explanation of Courses

NOTE: History 17A-17B does not count toward credit for a major or minor in history.

Any history course, with the exception of History 270A-270B, may be taken either semester, the A part not being a prerequisite to the B part.

## Lower Division Courses

**4A-4B. History of Modern Europe** (3-3) Year, I, II

A survey of European society, institutions and politics from about 1500 to the present. Fall semester: 1500-1799. Spring semester: 1799 to the present.

**8A-8B. History of the Americas** (3-3) Year, I

Survey of the history of the western hemisphere from its discovery to the present time.

**9A-9B. History of the Pacific Ocean Area** (3-3) Year, I

A general survey of the history and civilization of the peoples of the Pacific, with special emphasis upon exploration, trade, international rivalries, and social evolution of the island areas.

**17A-17B. History of American Civilization** (3-3) Year, I

Survey of the political and social development of the United States, with emphasis upon the rise of American civilization and ideals.

NOTE: This course is not open to freshmen.

## Upper Division Courses

**111A-111B. Ancient History** (3-3) Year, I

Fall semester: Greek history to the Roman conquest. Spring semester: Roman history to the fourth century A.D.

**121A-121B. Medieval History** (3-3) Year, I

Survey of the main events of European social, cultural, religious, political and economic history, between 500 and 1300 A.D.

**131A-131B. Renaissance, Reformation and Counter-reformation** (3-3) Year, I

A history of personalities and events connected with the social, political, cultural, economic and religious change between 1300 and 1600.

**141. Europe in the Seventeenth and Eighteenth Centuries** (3) I

European thought, politics and international relations from the Thirty Years' War and Louis XIV to the Seven Years' War.

**142. The French Revolution and Napoleonic Era** (3) II

Study of conditions in France prior to 1789, the Revolution, 1789-1799, the organization of France and Europe under Napoleon, character of his empire, and the reorganization of Europe at the Congress of Vienna.

**143A-143B. Europe in the Nineteenth Century** (3-3) Year, I

Reaction in Europe, the development of nationalism, the impact of industrialism, and the background of World War I. Covers period 1815-1914.

**144A-144B. The World Wars** (3-3) Year, I

Developments from 1914 to the present. Semester I: World War I, the peace settlements, and the background of World War II. Semester II: World War II and its aftermath.

**151A-151B. History of England** (3-3) Year, I

Survey of political, constitutional, social and economic developments since 1066. Designed for pre-legal students, majors in English, and as a background for American History.

**156A-156B. History of British Expansion** (3-3) Year, I

Study of the growth and development of the British Empire from the first overseas empire to the present. History 156B not open to students with credit for Political Science 160.

**161. Mexico and Caribbean Countries** (3) I

Special attention to relations between the United States and these countries, and to recent developments in Mexico.

**162. South America Since Independence** (3) II

Republics of South America. Development of nationality, struggles for political stability, exploitation, diplomatic and commercial relations with the United States, and other international problems of South America. Survey of present-day conditions.

**171A-171B. Rise of the American Nation** (3-3) Year, I

Semester I: English colonization in North America, development of colonial institutions and political customs, and areas of international conflict during 18th century. Semester II: The Revolution and establishment of the government under the Constitution of 1787. Covers period to 1814.

**172A-172B. Constitutional History of the United States** (3-3) Year, I

Colonial governments, formation of the national Constitution, historical development of constitutional government, and significant phases of American constitutional law. Not open to students with credit for Political Science 139A and 139B.

**173A-173B. The Expansion of the United States** (3-3) Year, I

Lectures and readings on Jacksonian democracy, territorial expansion and the Mexican War, the slavery controversy, Civil War and Reconstruction, and attention to the growth and progress of the United States to the close of the nineteenth century.

**175A-175B. The United States in the Twentieth Century** (3-3) Year, I

The rise of the United States to the position of a world power; social and economic problems posed by the machine age; political action and adjustment, actual and proposed, intended as solutions for these problems.

**176A-176B. History of American Foreign Policy** (3-3) Year, I

Lectures and readings in the field of American foreign relations since 1776, with special emphasis, in the second semester, upon affairs since 1900. A general survey course. Not open to students with credit for Political Science 158A-158B.

**179A-179B. Intellectual History of the American People** (3-3) Year, I

A study of the ebb and flow of ideas in the United States since the founding of the English colonies, with special attention devoted to social and political thought.

**181A-181B. History of the West** (3-3) Year, I

The American frontier: Expansion, exploration, settlement and building of the new states, with emphasis upon frontier problems of defense, communications, finance, etc.; the development of cultural institutions. A critical examination of the causes, effects and results of the frontier experiences of the American people.

**189. History of California** (3) I, II

The economic, social, intellectual, and political development of California from the earliest times. Emphasis will be on the founding of California, international struggles for California; American conquest and Gold Rush Era; development of California as a state.

**191A-191B. History of the Far East** (3-3) Year, I

Particular emphasis during the first semester upon the history, both internal and international, of the Far East through the nineteenth century. The second semester will be devoted to a consideration of developments in the twentieth century.

**192. History of Russia** (3) II

A general survey emphasizing the period since Peter the Great; the Russian Empire's relations with its national minorities; Tsarist experiments in political and social reform; revolutionary socialism; the development of the U. S. S. R.

**193. History of China** (3) I (Offered in 1950-51 and alternate years)

A survey of Chinese history and institutions from antiquity to the present.

**194. History of Japan** (3) I (Offered in 1951-52 and alternate years)

A general survey of the political, economic and social development from the foundation of the empire to contemporary times. Special attention will be given to religions, philosophy, literature and the arts.

**199. Special Course for Advanced Students** (3) II

Required of all students with a history major in liberal arts and those working toward a General Secondary credential with a history major. To be attended during the senior year.

### Graduate Courses

**270A-270B. Seminar** (2-2) Year, I

Required of all candidates for the General Secondary credential with a history major, and for the M.A. degree in history. Prerequisites: 16 to 18 units in upper division history, including 199, or permission of instructor. 270A is a prerequisite for 270B.

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

## HOME ECONOMICS

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is not offered in home economics; however, students may elect a *general major* with the field of concentration in home economics. For specific information on the home arts curriculum, refer to the Home Arts Curriculum in the section entitled: Preprofessional and Vocational Curricula, and for further information on the general major, refer to section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

A *teaching major* is not offered in home economics.

### Minor

A *minor in arts and sciences* is offered in home economics. The minor must include at least 15 units of work in home economics, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in home economics for the general secondary, general junior high, and special secondary credentials. Home economics may also be used as a second minor for the general elementary credential. For specific information, refer to the outline of requirements for these credentials.

### Lower Division Courses

NOTE—Courses in home economics may not be used to meet any part of the 12-unit social science requirement, nor may they be used as part of a social science major or minor.

**1. Home and Family Life** (3) I, II

Consideration of necessary preparation for marriage, family budgets and money management; recreation, entertaining and social usage; finding a home, its furnishings and equipment with consideration of arrangement and care; child care, proper training and guidance. Open to men and women.

**5. Food Preparation** (3) I

Principles of food selection, preparation and service with consideration of aesthetic and nutritional values. Experience in food preparation and meal service.

**10. Fundamentals of Clothing** (3) I

Selection of clothing with self-analysis as a basis; wardrobe planning and buying procedures. A study of commercial patterns and principles of garment construction. One lecture and two three-hour laboratories per week.

**11. Clothing Design** (3) II

Selection and construction of children's and adults' garments; care, repair and make-over problems of clothing. One lecture and two three-hour laboratories per week. Prerequisite: Home Economics 10 or equivalent.

**55. Household Equipment (2) II**
Selection, methods of operation and care of household appliances. Equipment of various types used and tested for efficiency and cost of operation. Efficient kitchen arrangement and storage space.

**61A. Nutrition (2) II**
Practical problems of nutrition including food requirements, food selection, and food habits. (For men and women.)

**61B. Nutrition Laboratory (1) II**
Nutrition principles applied to food preparation, meal preparation, and special diets.

**62. Food and Nutrition (3) II**
Selection, purchase, and service of meals with a consideration of nutritional needs of family groups, food habits and social customs. Open to all students except prenursing students.

### Upper Division Courses

**100. Advanced Clothing Design (3) II**
Design and construction of tailored silk and wool garments, informal and formal type dresses. Costume assembling. Prerequisite: Home Economics 11 or equivalent.

**101. Clothing Selection (3) I**
Aims to develop taste in dress through a better understanding of the relation of art principles, psychology, fashion trends, personality and physical characteristics to individuals. History of costume is studied briefly as an aid in understanding recurring cycles in fashion. A consideration of buymanship information necessary in wardrobe selection to insure satisfaction and economy.

**102. Child Growth and Development (3) I, II**
This course deals with a study of the mental, emotional, social, and physical development during childhood and early adolescence. Directed observation required. Not open to students who have credit for Psychology 106 or Education 102B.

**105. Family Meals (3) II**
This course deals with the planning, preparing, and serving of attractive, well-balanced meals for different income levels, and for various occasions. The student will have responsibility for menu making, food purchasing, and meal management.

**135. Marriage and the Family (3) I, II**
Preparation for marriage. Prediction scales for evaluating success or failure in marriage. Parent-child relationships; factors in successful and unsuccessful marriages; higher education and the birth rate; married women in industry and professions; desertion and divorce. Not open to students who have credit for Sociology 45 or 135.

**150. Home Management (3) I, II**
Integration of the learning activity around a living situation with emphasis on cooperation and establishment of family goals. Management of time, energy, and money in relation to family living. (Open to men and women.)

**160A. Merchandise Analysis—Textiles (2) I**
Properties, uses, selection and care of textile fibers and fabrics. The aim is to develop judgment in the evaluation involved in the selection of textiles. (Open to men and women.)

**160B. Merchandise Analysis—Nontextiles (2) II**
Properties, uses, selection and care of metals, glass, rubber, fur, enamels and plastics. (Open to men and women.)

**161. General Textiles (2) II**
Factors involved in fundamental weaves, fabrics, color, and finishes with reference to selection of fabrics for home decoration and clothing. Relationships to durability and cost are emphasized. Open to all students except merchandising majors.

**170. Child Care and Development (3) I, II**
A study of the prenatal and pre-school periods of child development. Directed observation and participation in the nursery school.

# INDUSTRIAL ARTS
## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is not offered in industrial arts at this time; however, all the lower division requirements can be met during a two-year period. Upper division courses are also offered as facilities will permit and other courses are planned and will be added as soon as possible. Courses are designed for two objectives: (1) leading toward professional education with a Special Secondary Credential, and (2) for general education. The General Shop courses are designed to contribute to better family living and in them special emphasis is given to individual interests and objectives. Some of the other courses, while designed for prospective teachers, should also prove valuable to students desiring practical shop training on an elective basis.

A *teaching major* is not offered in industrial arts at this time; however, students planning to complete the Special Secondary Credential in industrial arts should take the following courses in the lower division in addition to the general lower division requirements: Mathematics C, D, and E, unless completed in high school; Chemistry 2A, or a year of high school chemistry; Physics 2A-2B; Art 2; Speech Arts 2A; Industrial Arts 2 or 21 and 51 or 52; Industrial Arts 41 or 42, 61 and 71.

### Minor

A *minor in arts and sciences* is offered in industrial arts. The minor must include at least 15 units of work in industrial arts, nine units of which must be from courses carrying upper division credit.

A *teaching minor* in industrial arts is offered for the general junior high, special secondary, and general secondary credentials. Industrial arts may also be used as a second minor for the general elementary credential. For specific information, refer to the outline of requirements for these credentials.

### Lower Division Courses

NOTE: Courses in industrial arts may not be used to meet any part of the 12-unit physical science requirement, nor may they be used as part of a major in the physical sciences.

**2. Mechanical Drawing** (3) I, II, Summer

Use and care of drafting equipment, freehand lettering, technique of the finished drawing including inking, simple orthographic projection, introduction to dimensioning problems, simple section and auxiliary views, fundamentals of pictorial drawing in isometric, oblique, and cabinet projection. One lecture and two laboratory sections per week. Not open to students with credit for Engineering 2.

**21. Industrial Drafting** (3) II

Introduction to industrial drafting procedures. Principles of orthographic projection as applied to aeronautical and machine drawings, sheet metal, furniture and related production drawings, and electrical and pipe layouts. One lecture and two laboratory sections per week. Prerequisite: Industrial Arts 2 or one year of high school mechanical drawing.

**31. Introductory General Shop** (3) I

A general course introducing basic operations in wood, bench and sheet metal, forging, foundry, welding and electricity with special consideration given to the needs of the individual and the homemaker. One lecture and two laboratory sections per week.

**32. Intermediate General Shop** (2) II

Additional training in any two of the fields of wood, metal, welding, forging, or simple machining, to meet the needs and objectives of the individual. Two laboratory sections per week. Prerequisite: Industrial Arts 31 or permission of the instructor.

**41. Elements of Metalwork** (3) I

Demonstration and practice in the use of hand tools commonly used in bench and sheet metal including fundamentals of pipe fitting and welding. Discussion of the principles and techniques of metalworking for the prospective shop teacher. One lecture and two laboratory sections per week. (Required for the Special Secondary credential in Industrial Arts.)

**42. Elements of Machine Operation** (3) I, II

Demonstration and practice in the safe operation of machine shop equipment including drill, milling machine, shaper, and precision grinder for the shop teacher. May be substituted for Industrial Arts 41 to meet requirements for the Special Secondary credential in Industrial Arts. One lecture and two laboratory sections per week.

**51. Elements of Woodwork** (3) II

Training in the use of hand tools commonly used in the woodshop. Discussion and demonstration of the principles and techniques of woodwork and woodworking machines for the teacher. One lecture and two laboratory sections per week. (Required for the Special Secondary credential in Industrial Arts.)

**52. Advanced Woodwork** (3) I

Demonstration and practice in the safe operation of woodworking machines including the lathe and in the fundamentals of furniture joinery. Training in setting up and maintaining machines. One lecture and two laboratory sections per week. Prerequisites: Industrial Arts 51 or one year of high school woodwork.

**61. Elements of Electricity** (3) II

Demonstration of the basic principles of electricity as related to the home and to industry; practice in the use of tools, meters and materials in the laboratory and as applied to home appliances and the design and construction of simple devices suitable to the high school shop. One lecture and two laboratory sections per week. (Required for the Special Secondary credential in Industrial Arts.)

**62A-62B. Applied Electronics Laboratory** (3-3) Year, I (May not be offered in 1950-51)

Practice in the construction and testing of electronic devices, such as radio receivers, television receivers, photocell systems, vacuum tube voltmeters, special control, and testing devices. Two hours of discussion and six hours of laboratory per week. Prerequisite: Industrial Arts 61 or permission of instructor.

**71. Elements of Transportation Machinery** (3) I

Demonstration and study of the theory of internal combustion engines as applied to transportation. Practice in maintenance, tune up and minor repair of automobiles. Consideration of the problems of safe driving and the development of the necessary habits and attitudes. Two lectures and one laboratory section per week. (Required for the Special Secondary credential in Industrial Arts.)

## Upper Division Courses

**121. Advanced Mechanical Drawing** (3) I, II, Summer

Lettering practice, orthographic and isometric projection of machines and parts and of furniture. Theory and practice of dimensioning, working and production drawings, reproduction and principles of perspective. Intended for the prospective teacher. One lecture and two laboratory sections per week. Prerequisite: Industrial Arts 21.

**141. Advanced Metalwork** (2) I, II

Additional demonstration and practice on metalworking machines including press work, welding and forging, sheet metal forming, metal spinning and pipe layout and fitting. Two laboratory sections per week. Prerequisite: Industrial Arts 31 or 41.

**143A-143B. Advanced Machine Shop Practice** (3-3) Year, I, II

A year course in the principles and practice of machine tool operation stressing tool making, instrument work and modelmaking. One lecture and two laboratory sections per week. Prerequisite: Industrial Arts 42 or permission of instructor.

**146. Forging and Welding** (2) (May not be offered in 1950-51)
Principles and techniques of forging and welding including oxy-acetylene and electrical as applied to repair work and the fabrication of ornamental metal work. Two laboratory sections per week. Prerequisite: Industrial Arts 31 or 41.

**151A-151B. Furniture and Cabinet Making** (2-2) (May not be offered in 1950-51)
A year course in advanced woodwork problems. Design and construction of furniture and mill cabinet work. Two laboratory sections per week. Prerequisite: Industrial Arts 51 or 52.

**152. Finishing and Painting** (2) I
Theory, demonstration and practice of a wide variety of wood and metal finishing processes, including fillers, stains, varnishes, enamels and lacquers. Two laboratory sections per week. Prerequisite: Industrial Arts 31 or 51 or 52.

**153. Patternmaking and Woodturning** (3) II
Demonstration and practice of the principles of patternmaking and woodturning. Development of skill in woodturning operations. One lecture and two laboratory sections per week. Prerequisite: Industrial Arts 51 and 52 or equivalent.

**190. Experimental Shop** (1 or 2) I, II
Individual shop work on complex projects on an experimental basis. Prerequisite: Permission of the instructor.

**193. Industrial Arts Organization and Management** (2) II
Study of the organization of Industrial Arts in secondary schools, review of project requirements and methods of developing student participation in shop management. Two lectures per week.

**194. Recent Trends in Industrial Arts Education** (2) I
Survey of current trends and practices in the field of Industrial Arts in Secondary Education. There will be opportunity for individual work on related problems of interest to members of the class. Two lectures per week.

## JOURNALISM

### IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts* and sciences is not offered in journalism. Students desiring major work in journalism at this college should plan for a *general major* with the field of concentration in journalism. For specific information regarding this plan, refer to the curriculum in pre-journalism in the section entitled: Pre-professional and Vocational Curricula, and to the description for the general major in the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

### Minor

A *minor in arts and sciences* is offered in journalism. The minor must include at least 15 units of work in journalism, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in journalism.

### Lower Division Courses

**51A. Elements of Journalism** (3) I
Theory of news writing; introduction to the newspaper as an institution in modern society. Prerequisites: Sophomore standing and grade of B in freshman composition, or consent of instructor; and Commerce 2A (may be taken concurrently) or equivalent, with 30-word-per-minute performance.

**51B. News Gathering and Reporting** (3) II

Practice in writing news copy, both for class criticism and for publication in *The Aztec.* Prerequisite: Grade of C or better in Journalism 51A.

**92. Special Projects** (1-3) I, II

Special work in journalism by arrangement with instructor. Work on *The Aztec,* yearbook, other publications, with consent of instructor. (NOTE.—A maximum of six units of Special Projects allowable toward a general major or journalism minor requirements. As elective credit, such units not limited except at instructor's discretion. )

### Upper Division Courses

**101A. Magazine Article Writing** (3) I

The technique of the magazine article; article types; research techniques. Prerequisites: Junior standing, with average grade of B in all previous composition and journalism courses, *plus* permission of instructor.

**101B. Magazine Article Marketing** (3) II

Market analysis; slanting; the business of writing. Production of at least two full-length magazine articles, and marketing of same, required during the course. Prerequisite: Journalism 101A with grade of C or better.

**151. Advanced Editing and Reporting Techniques** (3) I

Editing copy, writing headlines, making up pages, handling telegraph copy. Practice in specialized forms of journalistic writing. Prerequisite: Journalism 51A-51B.

**191A-191B. City and County Newspaper Practice** (1 to 3-1 to 3) Year, I, II

A special course in applied journalism during which students work on nearby daily and weekly newspapers by special arrangement with editors. Prerequisite: Journalism 51A and 51B with grade of B, *plus* permission of instructor.

**192. Special Projects** (1-3) I, II

Special work in journalism by arrangement with instructor. Work on *The Aztec,* yearbook and other publications, with consent of instructor. (See "Note" under Jour. 92, above.)

## LATIN

### IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in Latin.

### Lower Division Courses

**1. Elementary** (3) I, II

Study of the Latin language and Roman culture, with reading of selected prose passages.

**2. Elementary** (3) I, II

Continuation of Latin 1. Prerequisite: Latin 1 or one year of high school Latin.

**B. Elementary** (5) I (Offered for last time in Fall of 1950)

Thorough study of Latin grammar with daily written exercises and the translation of selected passages from Caesar, Cicero, and Pliny. The importance of these authors and their culture to western civilization will be considered. Students who have had two years of Latin in high school should register for Latin B for which only four units will be allowed. For specific information, consult the Chairman of the Department.

**C-D. Intermediate** (3-3) Year, I (Not offered in 1950-51)

Survey of Latin poetry with chief emphasis upon Vergil's *Aeneid.* Selections will be read from Catullus, Horace, Ovid, and others. Parallel European poetry will be considered. Latin B or equivalent is a prerequisite for Latin C. Latin C or equivalent is a prerequisite for Latin D.

# LIBRARY SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

*Major* and *minor* work are not offered in library science.

### Lower Division Courses

NOTE.—Library science may not be used to satisfy any part of the 12-unit social science requirement, nor may it be used as part of a social science major or minor.

**10. Use of the Library** (2) I, II

The chief object is to give a working knowledge of some of the resources of the library which every teacher and student should understand—the decimal classification, the card catalog, periodical indexes, and the most important reference books, together with some instruction in the preparation of bibliographies. The course will be a requirement of those students added to the library's staff of student assistants, although it will not prepare the student to become a librarian.

# LIFE SCIENCE

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in life science. Lower division requirements: Zoology 1A-1B or Biology 10A-10B; Zoology 20 or Physiology 1A; Botany 2A-2B or Botany 1 or Bacteriology 1; Chemistry 1A-1B or 2A-2B; Physics 2A-2B-3A-3B. Recommended: Geology 1A, Astronomy 1. Upper division requirements: A minimum of 24 upper division units in zoology, bacteriology and botany of which 6 units may be from a related field. The plan for this major must be with the approval of the Chairman of the Division of Life Sciences.

A *teaching major* in life science is offered for the general secondary credential. A teaching major in *general science* is offered for the junior high school credential. For specific information refer to the outlines for this credential.

### Minor

A *minor in arts and sciences* is offered in life science. Lower division requirements: Biology 10A-10B or equivalent; Zoology 20; Chemistry 2A-2B or 1A. Recommended: Astronomy, geology, physics. Upper division requirements: At least 9 upper division units in zoology and botany to be selected with the approval of the Chairman of the Division of Life Sciences.

A *teaching minor* in life science is offered for the general secondary credential. A teaching minor in offered in *general science* for the junior high school, special secondary, general elementary and kindergarten-primary credentials. For specific information, refer to the outlines for these credentials.

# MATHEMATICS

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in mathematics. Lower division requirements: Mathematics 3A-3B, 4A. Recommended: Two or more of the following: Astronomy 1; Economics 1A-1B; Commerce 2; Engineering 1A, 21; Physics 4A-4B or 2A-2B-3A-3B; 10 units of French or German. Upper division requirements: A minimum of 24 upper division units in mathematics or 18 units in upper division mathematics and 6 upper division units from related areas. The selection of courses must be approved by the Chairman of the Department.

A *teaching major* is offered in mathematics for the general junior high school credential and for the general secondary credential. For specific information, refer to the outline of requirements for these credentials.

## Minor

A *minor in arts and sciences* is offered in mathematics. The minor must include at least 15 units of work in mathematics, nine units of which must be from courses carrying upper division credit. The selection of courses must be approved by the Chairman of the Department.

A *teaching minor* is offered in mathematics for the general secondary, the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

## Lower Division Courses

NOTE: Courses in mathematics may not be used to meet any part of the 12-unit natural science requirement.

**A. Basic Mathematics** (Algebra) (3) I, II

Fundamentals of algebra and arithmetic with applications to everyday problems. For students who have had less than two years of high school mathematics or need training in this area.

**B. Basic Mathematics** (Geometry) (3) I, II

Fundamentals of geometry including applications to everyday problems. For students who have had less than two years of high school mathematics or for students who need training in this area. Prerequisite: Mathematics A or its equivalent.

**C. Intermediate Algebra** (3) I, II

An extensive review of elementary algebra followed by quadratic equations, simultaneous equations, ratio and proportion, variation, progressions, etc. Prerequisite: Elementary algebra and geometry or Mathematics A-B.

**D. Trigonometry** (3) I, II

Plane trigonometry with special attention to logarithms and those aspects needed in analytic geometry and the calculus. Prerequisite: Mathematics C or its equivalent.

**E. Solid Geometry** (2) II

Properties of lines and planes. Calculation of areas and volumes. Prerequisite: Mathematics C or its equivalent.

**S. Slide Rule** (1) I, II

Theory and use of the slide rule. Practice in performing the fundamental operations of arithmetic. Some attention is given to more involved computations. Prerequisite: Trigonometry or Mathematics A-B or equivalents.

**1. Algebra and Trigonometry** (3) I, II

Review of algebra and trigonometry. Further study of identities, graphs, solution of algebraic and trigonometric equations, determinants, and mathematical proofs. Prerequisite: Two years of high school algebra and trigonometry.

**3A. Plane Analytic Geometry** (3) I, II

Equations and loci, conic sections, coordinate transformations, Cartesian and polar coordinates, and parametric representation. Prerequisite: Mathematics 1 or trigonometry and passing of qualifying examination. (Qualifying examination will be given during the first week of the semester.)

**3B. First Course in Calculus** (3) I, II

Introduction to differential and integral calculus with applications. Prerequisite: Mathematics 3A.

**4A. Second Course in Calculus** (3) I, II

Differentiation, integration, infinite series, and applications. Prerequisite: Mathematics 3B.

**4B. Third Course in Calculus** (3) I, II

Partial differentiation, successive integration, applications, and a brief treatment of solid analytic geometry. Prerequisite: Mathematics 4A. (Solid geometry is recommended). Not open for credit to students with credit for Math. 117.

**7A-7B. Mathematical Analysis** (3-3) Year, I

Designed for students who do not intend to prepare for a professional career in physical science or in engineering but who desire or need one year of college mathematics. Consideration is given to the processes and applications of algebra, trigonometry, and differential and integral calculus. Prerequisites: High school algebra and plane geometry. 7A is a prerequisite to 7B. Students with credit for Math. 1 or 3A will not receive credit for 7A. Students with credit for Math. 3B will not receive credit for 7B.

### Upper Division Courses

**104. History of Mathematics** (3) II

History of mathematics down to early modern times. Prerequisite: Mathematics 3B or 7B.

**105. College Geometry** (3) I

A synthetic treatment of the points and lines associated with triangles and quadrilaterals, similarity, inversion, rules and compass construction, etc. Highly recommended for all teachers of high school geometry. Prerequisite: Mathematics 3B or 7B.

**106. Projective Geometry** (3) I (Offered in 1951-52)

Concurrence of lines, collinearity of points and other properties of figures not altered by projections; construction and study of ellipses, hyperbolas, and parabolas by means of projections. Prerequisites: Mathematics 3B or 7B and permission of instructor.

**111. Theory of Algebraic Equations** (3) I, II

Determinants, complex numbers, and theory of algebraic equations. Prerequisite: Mathematics 3B or 7B.

**112. Analytic Geometry of Space** (3) II (Offered in 1951-52)

The coordinate systems in space; lines, planes, and quadric surfaces; applications. Prerequisite: Mathematics 4A.

**117. Intermediate Calculus** (3) I, II

Essentially the same as Mathematics 4B. Additional special work for advanced students may be assigned. Prerequisite: Mathematics 4A. Not open for credit to students with credit for Math. 4B.

**118A. Advanced Mathematics for Engineering Students** (3) I, II

Introduction to differential equations, vector analysis, Fourier series, hyperbolic, elliptic, and Bessel functions. Prerequisite: Mathematics 117 or its equivalent.

**118B. Advanced Mathematics for Engineering Students** (3) I, II

Introduction to partial differentiation, partial differential equations, line and surface integrals, complex variables, etc. Prerequisite: Mathematics 118A.

**119. Differential Equations** (3) I, II

Ordinary differential equations of first and second order with applications to geometry, physics, and chemistry. Prerequisite: Mathematics 117 or its equivalent.

**121. Advanced Calculus** (3) II

Review of the fundamental concepts of the calculus, partial differentiation, series, line and surface integrals, etc. Prerequisite: Mathematics 118A or Mathematics 119.

**124. Vector Analysis** (3) I

Vector algebra, differentiation of vectors, gradient, divergence, and curl. Applications to geometry and physics. Prerequisite: Mathematics 117 or its equivalent.

**140A-140B. Mathematical Statistics** (3-3) Year, I

Graphical and arithmetical characterization of observed frequency distributions. theoretical discrete and continuous frequency distributions including binomial, Poisson, and normal distribution; linear and multiple correlation, large and small sample theory including Student's T, Chi-square, and the F distributions with applications. Prerequisite: Mathematics 117 or its equivalent.

**199. Special Study** (1-2) I, II

Supervised individual study in selected mathematical topics. Prerequisite: Permission of instructor.

### Graduate Courses

**201. Concepts of Geometry From an Advanced Viewpoint** (2) I

An introduction to the fundamental concepts of geometry and the processes of mathematical thinking in this area. Recommended for candidates for the general secondary credential. Prerequisite: One upper division course in geometry.

**202. Concepts of Algebra From an Advanced Viewpoint** (2) II

An introduction to the fundamental concepts of algebra and the processes of mathematical thinking in this area. Recommended for candidates for the general secondary credential. Prerequisite: One upper division course in algebra.

**204. Advanced Work in the History of Mathematics** (2) I

Intensive study of specific phases of the history of mathematics with attention to implications for teaching mathematics. Prerequisite: Mathematics 104.

# MUSIC

## IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is offered in music. Lower division requirements: Music 1B-1C-1D, 4A-4B, 4 units of applied music (study of piano, voice, or orchestral instrument); Aesthetics 1A-1B. Upper division requirements: A minimum of 24 upper division units in music selected from the following: Music 105A-105B, 106, 107, 119A, 120A, 121A-121B, 128; 4 units of applied music, Aesthetics 102A-102B, and 4 units of music activity (Music 109, 110, 111, 112, 113, 114, 115, 125, 126, or 130). As laboratory work, each music major is required to carry one music activity per semester. It is recommended that both vocal and instrumental activities be included at some time during the college course. At least a C average in upper division music courses is necessary.

At least two months before graduation, each senior music major will present a recital before the music faculty. At this time, the faculty will select those students who are to be granted the privilege of a public recital.

A *teaching major* is offered in music for the general secondary credential and the special secondary credential in music. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in music. The minor must include at least 15 units of work in music, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in music for the general secondary, the general junior high school, and the special secondary credentials. It may be offered only as a second teaching minor for the general elementary and the kindergarten-primary credentials. For specific information, refer to the outlines of the requirements for these credentials.

### Lower Division Courses

(Descriptions of courses in the field of music appreciation and history of music are listed under *aesthetics*.)

**1A. Musicianship—Fundamentals of Music** (3) I, II

The elements of music; scale construction; elementary music theory; drill in music reading both with syllables and with words; ear training, elementary music dictation. Basic course for all general elementary credential students. Music majors receive no credit toward graduation. All music majors are required to register for Section 1, only.

**1B. Musicianship—Music Reading and Ear Training** (2) I, II

Tonal and rhythmic dictation; rhythmic writing; sight singing. Basic course for majors and minors. Prerequisite: Music 1A.

**1C-1D. Musicianship—Advanced Music Reading and Ear Training** (2-2) Year, I
Tonal work in minor keys; modal scales; dissonant triads and seventh chords; interval feeling in all chords; rhythmic progression and elementary forms; rhythmic, melodic and harmonic dictation. Prerequisite: Music 1B. 1C is a prerequisite for 1D.

**2A. String Instruments** (1) I, II
Beginner's class in violin, viola, 'cello and string bass. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

**3A. Woodwind Instruments** (1) I, II
Beginner's class in oboe, clarinet, flute and bassoon. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

**4A-4B. Elementary Harmony** (3-3) Year, I
Scale construction, intervals, by-tones and diatonic harmonies. Transposition and original composition in the simpler forms. Prerequisites: Music 1A-1B, or the equivalent, and at least one year of piano study. 4A is a prerequisite for 4B.

**5A. Percussion Instruments—Drums** (1) I, II
Snare drum, bass drum, cymbals and small instruments of percussion group techniques from beginning work through all phases of concert and marching band requirements.

**5B. Percussion Instruments—Mallet Played** (1) I, II
Necessary technique and applied elementary theory to prepare the student in the fundamentals of playing the Tympani, Glockieuspiel, Xylophone, Marimba, Vibraphone, Orchestra Bells and Chimes.

**6A. Brass Instruments** (1) I, II
Beginner's class in trumpet, French horn, baritone, trombone and tuba. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.

**7A. Music Materials for the Elementary School** (3) I, II, Summer
Study of the song material in the state music texts and in the supplementary texts. Appreciation materials applicable to the elementary school. Required course for all general elementary credential students. Prerequisite: Music 1A.

**9A-B-C-D. Treble Clef Sextette** (½-½-½-½) I, II
Members selected by auditions from Treble Clef (Music 10).

**10A-B-C-D. Women's Glee Club—Treble Clef** (½-½-½-½) I, II
Entrance upon examination.

**11A-B-C-D. Men's Quartet** (½-½-½-½) I, II
Members selected by auditions from Men's Glee Club (Music 12).

**12A-B-C-D. Men's Glee Club** (½-½-½-½) I, II
Entrance upon examination.

**13A-B-C-D. Orchestra** (1-1-1-1) I, II
Permission of the conductor required for membership.

**14A-B-C-D. Vocal Ensemble** (½-½-½-½) I, II
Members selected by auditions from Choral Club (Music 15).

**15A-B-C-D. Choral Club** (½-½-½-½) I, II
Entrance upon examination.

***16A-B-C-D. Individual Study of an Orchestral Instrument** (1-1-1-1) I, II

***17A-B-C-D. Individual Study of Voice** (1-1-1-1) I, II

***18A-B-C-D. Individual Study of Piano or Organ** (1-1-1-1) I, II
Prerequisite: The ability to play artistically hymns and folk songs of the type found in the Golden Book of Favorite Songs.

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* See explanation below for conditions under which credit may be given for music study under private instructors.

**20A-B-C-D. Chorus** (½-½-½-½) I, II
Open to anyone interested in singing standard choral works. No examination required. No public performances.

**24A. Beginning Instrumental Ensemble** (½) I, II
Open to all instrumental students. Group playing of simple orchestral and band scores. Prerequisite: Music 2A, 3A, 6A, or equivalencies, one or more.

**24B. Intermediate Instrumental Ensemble** (½) I, II
Construction of group performance of orchestral and band scores of more advanced grade. Material covered will prepare the student for minor parts in either concert orchestra or symphonic band. Prerequisites: Music 24A or equivalent.

**25A-B-C-D. Marching Band** (1-1-1-1) I, II
Permission of Conductor required for membership.

**26A-B-C-D. Symphonic Band** (1-1-1-1) I, II
Permission of the Conductor required for membership.

**28A-28B. Piano** (1-1) Year, I
Fundamental playing and reading technics for the pianoforte. Emphasis upon playing by ear, and the development of interpretative ability. For beginners only. No credit for music majors and minors.

**28C-28D. Continuation of First Year Piano** (1-1) Year, I
Study of more advanced piano literature. Considerable emphasis upon ensemble piano playing and accompanying. Prerequisites: Music 28A-28B, and consent of instructor. No credit for music majors. Credit will be given to music minors. 28C is a prerequisite for 28D.

**29A-29B. Class Voice** (1-1) Year, I
A class for beginners in the vocal field taking up the problems of breath control, tone placement, articulation and enunciation. Frequent performance before class required. Limited to 15. 29A or equivalent is a prerequisite for 29B.

**29C-29D. Continuation of First Year Voice** (1-1) Year, I
Study of more advanced songs with attention being given to interpretation, as well as continued work on tone, articulation and placement. Frequent performance before class required. Limited to 15. 29C or equivalent is a prerequisite for 29D.

**30A-30B. Chamber Music** (1-1) Year, I
String and woodwind ensembles. The consent of the instructor necessary for admission to class.

**31. Opera Technique** (2)
Training in the interpretation and characterization of light and grand opera. Specific work in coordination of operatic ensemble.

## Upper Division Courses

(For description of courses in the field of music appreciation and history of music, see *aesthetics.*)

**101. Survey of Harmony and Musical Form** (2)
A review of diatonic and chromatic harmony, modulation, and musical form. The material covered will serve as refresher study for the Colleague Examination under the California Plan of the Music Teachers Association of California. Not open to music majors or minors.

**105A-105B. Advanced Harmony and Composition** (3-3) Year, I
Study of the possible types of modulation and chromatic harmonies: Continuation of harmonic analysis and original composition. Prerequisite: Music 4A-4B. 105A is a prerequisite for 105B.

**106. Counterpoint** (2) I
Study of the five species of counterpoint with much practice in writing in such forms. Application of contrapuntal style to modern composition. Prerequisite: Music 4A-4B.

**107. Form and Analysis** (2) II
Aural and visual analysis of music forms through a consideration of structure, harmonic content, and style. Prerequisite: Music 105A-105B.

**109A-B-C-D. Treble Clef Sextette** (½-½-½-½) I, II
Members selected by auditions from Treble Clef (Music 110).

**110A-B-C-D. Women's Glee Club—Treble Clef** (½-½-½-½) I, II
Entrance upon examination. A maximum of 2 units in glee club may be counted toward the A.B. degree.

**111A-B-C-D. Men's Quartet** (½-½-½-½) I, II
Members selected by auditions from Men's Glee Club (Music 112).

**112A-B-C-D. Men's Glee Club** (½-½-½-½) I, II
Entrance upon examination. A maximum of 2 units in glee club may be counted toward the A.B. degree.

**113A-B-C-D. Orchestra** (1-1-1-1) I, II
Permission of the conductor required for membership. A maximum of 4 units in orchestra may be counted toward the A.B. degree.

**114A-B-C-D. Vocal Ensemble** (½-½-½-½) I, II
Members selected by auditions from Choral Club (Music 115).

**115A-B-C-D. Choral Club** (½-½-½-½) I, II
Entrance upon examination. A maximum of 2 units in choral club may be counted toward the A.B. degree.

***116A-B-C-D. Advanced Individual Study of an Orchestral Instrument** (1-1-1-1) I, II

***117A-B-C-D. Advanced Individual Study of Voice** (1-1-1-1) I, II

***118A-B-C-D. Advanced Individual Study of Piano or Organ** (1-1-1-1) I, II

**119A. Instrumental Conducting** (1) I, II
Conducting and reading of orchestral scores.

**120A. Vocal Conducting** (1) I, II
The theory of vocal conducting together with practical experience gained from directing the college chorus. Prerequisite: Upper division music major or minor.

**121A-121B. Instrumentation and Arranging** (2-2) Year, I
Arranging of music for full orchestra. Selected works of pupils to be performed by standard orchestras. 121A is a prerequisite for 121B.

**124A. Beginning Instrumental Ensemble** (½) I, II
Open to all instrumental students. Group playing of simple orchestral and band scores. Prerequisite: Music 2A, 3A, 6A, or equivalencies, one or more.

**124B. Intermediate Instrumental Ensemble** (½) I, II
Continuation of group performance of orchestral and band scores of more advanced grade. Material covered will prepare the student for minor parts in either concert orchestra or symphonic band. Prerequisites: Music 24A or 124A, or equivalent.

**125A-B-C-D. Marching Band** (1-1-1-1) I, II
Permission of conductor required for membership.

**126A-B-C-D. Symphonic Band** (1-1-1-1) I, II
Permission of the conductor required for membership. A maximum of 4 units in band may be counted toward the A.B. degree.

**128. Methods in Teaching Piano** (3) Summer
Teaching of beginning intermediate and beginning piano. Survey of materials available for child and adult classes. Special consideration of the problems of the adult beginner. Supervised teaching of beginning students in individual lessons and in class groups.

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* See explanation below for conditions under which credit may be given for music study under private instructors.

**130A-130B. Chamber Music** (1-1) Year, I

String quintet and woodwind ensembles only. Permission of the instructor necessary for class membership.

### Graduate Courses

**200A-200B. Special Problems in Music** (2-2) Year, I

A graduate course in which students may carry out projects in various fields of music under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply for work within a certain field after conference with the music faculty.

**203. Musicology** (2) I

Survey of bibliography and methods of research in music history and literature. Emphasis upon inter-relationship of musical developments and trends in other arts. Completion of an acceptable thesis in fields of investigation chosen by the student. Prerequisites: Aesthetics 102A-102B and permission of the instructor. Advanced courses in Harmony, Composition, and Form and Analysis are desirable.

**206. Composition** (2) II

Music composition in the larger forms. Students will be required to submit a complete work in one of the larger musical forms as thesis in the course. Prerequisites: Music 105A-105B, 106A, 107A, 121A and permission of the instructor.

## CONDITIONS UNDER WHICH CREDIT MAY BE GIVEN FOR MUSIC STUDY UNDER PRIVATE INSTRUCTORS

Credit may be allowed for private instruction in music under the following conditions:

1. The applicant for such credit must be a regularly enrolled student in the music department of the college.
2. The instructor giving such private work must be approved by the Music Department. All private work and the names of all such teachers must be registered in the office of the music department chairman at the beginning of the semester.
3. In the case of first semester private study, a placement examination conducted by the music department faculty at the beginning of the semester will show the status of the student at the beginning of his work.
4. Evidence that the standards of the Music Department have been met will be shown by an examination conducted by the music department faculty at the end of the semester.
5. Ten clock-hours of lessons, and 100 hours of practice per semester are required for one unit of credit.

## PHILOSOPHY

### IN THE DIVISION OF SOCIAL SCIENCES

*Major* work is not offered in philosophy.

### Minor

A *minor in arts and sciences* is offered in philosophy. The minor must include at least 15 units of work in philosophy, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in philosophy.

### Lower Division Courses

NOTE: Courses in philosophy may not be used to meet any part of the 12-unit social science requirement, nor may they be used as part of a social science major or minor.

**1A-1B. Introduction to Philosophy** (3-3) I, II

The major problems of philosophy and some significant approaches to their solution. The treatment is primarily critical and analytic rather than historical. Through free class discussion, each student is encouraged to develop for himself a world-view. Prerequisite: 1A is prerequisite for 1B.

**3A-3B. History of Philosophy** (3-3) Year, I

The development of the major concepts of philosophers in the western tradition. Relations of philosophy to science, art, religion, and social and political conditions. 3A covers the ancient and medieval period, 3B the modern. 3A is not prerequisite for 3B.

**20. Logic** (3) II

The use of logic in science and practical life. Analysis of fallacies. Logic and language. Formation and validation of hypotheses. Interpretations of probability. The logic of experimentation.

**101. Contemporary Philosophy** (3) II

The major philosophical issues, movements, and figures in American and European philosophy of the twentieth century. Prerequisite: 3 units selected from Philosophy 1A, 1B, 3A, or 3B.

**110. The Philosophy of John Dewey** (2) II

(Offered in 1951-52 and alternate years)

The background, development, and influence of John Dewey's thought. His philosophy of education as related to his logical, epistemological, metaphysical, psychological, ethical, and esthetic theories.

**111A-111B. Theory of the State** (3-3) Year, I

The nature of the state, its organization and activities, and its relation to the individual and to other states. Special attention is given to recent developments in the field of political thought. Not open to students with credit for Political Science 111A-111B.

**121. Deductive Logic** (3) II

Definition, classification, and division. The forms of reasoning. Analysis of propositions. Immediate inference. The syllogism. Dilemmas. Modern symbolic logic.

**129. Social Ethics** (3) I

Ethical issues of contemporary life. Individualism vs. collectivism; democracy vs. dictatorship; ethical problems arising in law, medicine, business, government, and interpersonal relationships.

**130. Theory of Ethics** (3) II

A study of significant and typical value theories and systems and of the concrete problems such theories seek to explain. The emphasis will be placed on moral values. The student will be encouraged to examine critically his own system of values.

**136. Philosophy of Art** (3) II

The nature of esthetic experience. The principal theories of art, both traditional and contemporary, are studied at length, both in relation to actual artistic production and to the role of art in society.

**137. Philosophy of Science** (3) I

A critical examination of the basic concepts and methods underlying contemporary scientific thought. Contributions of the special sciences to a view of the universe as a whole. Prerequisite: 3 lower division units in philosophy.

## PHYSICAL EDUCATION

### IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

A *major in arts and sciences* is not offered in physical education.

A *general major* is offered in the field of recreation. For specific requirements, refer to the outline for the curriculum in recreation in the section on Preprofessional and Vocational Curricula, and for further information on the general major to the section on Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

A *teaching major* is offered in physical education for the general secondary and the special secondary credentials. Refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in physical education or in recreation. The plan for these minors must be approved by the departmental representative. A minor consists of at least 15 units of work in one field, nine units of which must be upper division credit. For further information on the minor in recreation, refer to the section entitled: Upper Division Requirements for the Bachelor of Arts Degree in Arts and Sciences.

A *teaching minor* is offered in physical education for the general secondary, the general junior high school, and the special secondary credentials. It may be offered only as a second teaching minor for the general elementary and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

A *teaching minor in recreation* is offered only as a second minor for students majoring in physical education. Nonphysical education majors may select recreation as a teaching minor for the general junior high school or the special secondary credential. For specific information, refer to the outlines of requirements for these credentials.

Candidates for a teaching credential in physical education should refer to the section on Admission to Teacher Education, and to the curriculum outline entitled: A.B. Degree with Special Secondary Credential in Physical Education.

With the exceptions listed, all lower division students must elect one or more courses each semester. Two units of activity credit must be offered for graduation. Exceptions: (a) Veterans of World War II; (b) students over 25 years of age. Students carrying fewer than 12 units during any semester may postpone taking physical education, but not be exempted therefrom. No permanent excuses from required activity courses will be granted. The college physician, in conjunction with the chairman of the department, will consider stringent cases on an individual basis and recommend.

## MEN'S DEPARTMENT

A medical examination is given each student when entering and recommendation is made as to type of activity most beneficial. Developmental physical education classes to care for special needs are offered. The content of the required courses is planned to give each student an opportunity to participate in many activities of carry-over value, developmental nature, and recreational interest. An opportunity is afforded for students to participate in competitive sports and intramural programs.

Freshmen are required to choose from courses numbered 1-10. Sophomores and upper division students may choose from all courses offered. An activity course may be taken for credit once only. The complete uniform will be furnished by the student.

### Lower Division Courses

### ACTIVITY COURSES

**1A-1B-1C-1D. Developmental Physical Education** (½) I. II

**2. Basketball** (½) I, II

**3. Boxing** (½) I, II

**4. Gymnastics** (½) I, II

**5. Soccer** (½) I

**6. Softball** (½) II

**7. Touch Football** (½) I

**8. Track and Field** (½) I, II

**9. Volleyball** (½) I, II

**10. Wrestling** (½) I, II

**13. Archery** (½) I, II

**14. Badminton** (½) I, II

**15. Fencing** (½) I, II

**16. Golf** (½) I, II

**17. Handball** (½) I, II

**18. Tennis** (½) I, II

**19. Bowling** (½) I, II

**20. Swimming** (½) I, II

**23. Sailing** (½) I, II

### INTERCOLLEGIATE SPORTS

**30. Baseball** (½) II

**31. Basketball** (½) I

**32. Cross Country** (½) I

**33. Football** (½) I

**34. Golf** (½) II

**35. Gymnastics** (½) II

**36. Tennis** (½) II

**37. Track** (½) II

**38. Wrestling** (½) II

## WOMEN'S DEPARTMENT

A medical examination is given each student when entering and recommendation is made as to type of activity most beneficial. Developmental physical education classes to care for special needs are offered. The content of the required courses is planned to give each student an opportunity to participate in many activities of carry-over value, developmental nature, and recreational interest.

Freshmen are required to choose from courses numbered 1-10. Sophomores may choose from all courses offered. An activity course may be taken for credit once only. The complete uniform will be furnished by the student.

The individual activities, tennis, golf, archery, badminton, swimming, and dancing are offered through the year. Candidates for the special secondary credential in physical education must select one as a major activity and two others as minors. Skills in the activities must be maintained as prerequisite to the senior course, Physical Education 185.

### Lower Division

### ACTIVITY COURSES

**1A-1B. Fundamental Skills** (½) I, II
Practice in efficient fundamental body movements.

**2A-2B. Folk Dancing** (Men and Women) (½) I, II
2A is a prerequisite for 2B.

**3A-3B. Modern Dance** (½) I, II
Practice in dance techniques and rhythms. 3A is a prerequisite for 3B.

### TEAM SPORTS

**4. Fieldball, Soccer, Speedball** (½) I, II

**5. Softball, Volleyball, Hockey** (½) I, II

**6. Basketball** (½) I, II

**11A-11B. Ballroom Dancing** (Men and Women) (½) I, II
11A is a prerequisite for 11B.

**12A-12B. Advanced Modern Dance** (Men and Women) (1-1) Year, I
Laboratory experiments in advanced choregraphy and percussion accompaniment. Prerequisites: 3A and 3B.

**13A-13B. Archery** (½) Year, I, II

**14A-14B. Badminton** (½) Year, I, II

**16A-16B. Golf** (½) I, II

**18A-18B-18C. Tennis** (Beginning, Intermediate, Advanced) (½-½-½) I, II
18A is a prerequisite for 18B; 18B is a prerequisite for 18C.

**19. Bowling** (½) I, II

**20A. Swimming** (For non-swimmers only) (½) I, II

**20B. Swimming** (Intermediate) (½) I, II

**21. Life Saving** (1) I, II
Learning of safety in and on the water and the ability to assist or rescue a person in danger of drowning. Course content qualifies for the American Red Cross Life Saving Certificate.

**22. Water Safety Instruction** (1) II
Methods and materials for teaching swimming. Course qualifies for American Red Cross Swimming Instructors Certificate. Prerequisite: P.E. 20B, or equivalent, and American Red Cross Senior Life Saving Certificate.

**23. Sailing** (½) I, II

## PROFESSIONAL THEORY COURSES

### Men and Women

### Lower Division Courses

**43. Professional Activities** (Men) (2) I

Presents an opportunity for majors to develop the skills and techniques of the dance as well as other phases of the activity program. Organization and presentation of materials are emphasized.

**44. Professional Activities** (Men) (2) II

Emphasis is placed on acquiring the skills, teaching techniques, and development of knowledge and interests in the combative activities, tumbling, apparatus, and stunts.

**51. First Aid and Safety Education** (2) I, II

Accepted procedure in meeting the emergencies which arise daily in any of the many places where the physical education teacher is called on for first aid. Attention to the prevention and minimizing of common accidents. Course contents qualifies for American Red Cross Certificate.

**53. Physical Education in the Elementary School** (2½) I, II

The State program in physical education for the elementary school forms the basis of the course. Candidates for the Elementary Credential are required to take the course section which includes two lectures and two laboratory periods per week. Candidates for the Special Secondary Credential in physical education may take the course section which includes two lectures without laboratory periods.

**72. Introduction to Physical Education** (2) I, II

History and principles of physical education and sports movements of the world. Objectives of the modern school program are studied and an effort is made to give to the student a basic philosophy and background for his professional training.

### Upper Division Courses

**145. Professional Activities: Team Sports** (Men) (2) I

The skills, rules, teaching techniques, officiating, and organization of materials in such sports as soccer, touch football, softball, hockey, basketball, and others are emphasized.

**146. Professional Activities: Individual Sports** (Men) (2) II

The skills, rules, teaching techniques, officiating, and organization of materials in such sports as handball, tennis, badminton, archery, golf, and others are emphasized.

**147. Professional Activities: Coaching Baseball and Track** (Men) (1-2) II

Organization of practice sessions, drills for developing fundamental drills and special abilities. Problems of scheduling, handling teams and game strategy are taken up. Rules, sessions, and officiating techniques are given attention.

**148. Professional Activities: Coaching Football and Basketball** (Men) (1-2) I

Organization of practice sessions, drills for developing fundamental skills and special abilities. Problems of scheduling, handling teams, and game strategy are taken up. Rules, sessions, and officiating techniques are given attention.

**155. Applied Anatomy and Kinesiology** (3) I

Anatomical and kinesiological analysis of human structure and movement. Application of analysis relative to mechanical principles as influenced by efficiency factors of body functions. Prerequisite: Zoology 8.

**156A-156B. Sports Methods** (Women) (2-2) Year, I

Analysis of skills in basketball, hockey, soccer, speedball, volleyball, and softball; methods of presenting sports to large groups; study of rules and officiating. Prerequisites: Physical Education 4, 5, and 6.

**160. Teaching of Body Mechanics** (Women) (2) I

Efficient use of the body in daily living; evaluation and classification of exercises, methods, and practice in planning and presenting material.

**161. Folk Dancing Materials and Advanced Techniques** (Women) (2) I

Folk customs, festivals, and costumes. Selection of dance materials for various age groups. Practice in advanced techniques. Prerequisite: Physical Education 2A.

**162. History and Philosophy of the Dance** (2) I (Offered in 1951-52)

Historical background and appreciation of dance, with special emphasis upon development of art in America. The justification for dance as an educational and creative art medium and its place in the curriculum. Not open to students with credit for Aesthetics 162.

**164A-164B. Methods in Modern Dance** (2-2) Year, I

Methods in the teaching of modern dance techniques and choreography. Selection of materials and course planning for the secondary school. Prerequisite: Physical Education 12A-12B, or satisfactory examination in dance skills.

**165. Administration of Community Recreation** (3) I

The principles of organization and promotion of leisure time and recreation activities. Content consists of a study of recreation leadership, the growth of the recreation movement, the operation of areas and facilities, program of activities, features, services, organization and administration problems. A required course for Recreation minors.

**168. Physiology of Exercise** (3) II

A non-laboratory course emphasizing the relation of physiology to muscular exercise in physical activities. Prerequisites: Physiology 1A and Zoology 8 or equivalent.

**170A-170B. Recreational Leadership** (2-2) Year, I

Principles and practices in recreational leadership. Methods of instruction and special techniques in the activities of the recreation program. Attention to crafts, music, social programs, drama, special projects, dance, sports, campcraft, and outdoor education.

**177. Individual Program Adaptation** (3) II

The adaptation of programs for the typical individual, including physical examinations, training and prescribed exercises, follow-up, instructional problems, and evaluation.

**184A-184B. Field Work in Recreation** (1 to 3-1 to 3) Year, I

Observation and participation in supervised group activities in the field. Practical experience in the various public and semi-public community recreational agencies.

**185. Techniques of Individual Sports** (Women) (1) I

Rules and teaching methods and testing individual playing techniques and knowledge in tennis, archery, badminton, and swimming. Prerequisite: Senior standing.

**190. Administration of Physical Education in the Secondary School** (3) I, II

Problems and practices in the organization and administration of the secondary school activity program. Study, selection and adaptation of activities, examination, and grouping of pupils, use and evaluation of tests. Selection and maintenance of equipment and facilities.

**199. Special Study in Physical Education or Recreation** (1-3) I, II

An opportunity is presented for extensive review of pertinent literature, individual research and advanced study of problems in the profession. Prerequisite: Approval of the chairman of the division.

## Graduate Courses

**200. Evaluation Procedures in Health, Physical Education and Recreation** (2)

A study of tests and measurements in the profession with practice in their use, construction and interpretation of results.

**201. Developmental Physical Education** (2)

Intensive study of postural divergencies, lack of physical development, and methods of correcting such conditions through exercise are studied. Practice in making physical examinations, constructing individual exercise programs, teaching remedial exercises, as well as ethical procedures and limitations are considered. Prerequisite: Applied Anatomy and Kinesiology.

**203. Problems in Physical Education** (2)

A survey of current problems facing the Physical Education profession is studied through a review of the literature, discussion of trends, observation of school situations together with the analysis and evaluation of actual problems. Written reports are required.

**204. Problems in Recreation** (2)

A survey of current problems facing the Recreation profession is studied through a review of the literature, discussion of trends, observation of school situations together with the analysis and evaluation of actual problems. Written reports are required.

**298. Special Study** (1-3)

An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

## PHYSICAL SCIENCE

### IN THE DIVISION OF PHYSICAL SCIENCES

### Lower Division Courses

*Major* and *minor* work not offered in physical science.

**1A. Introduction to Physical Science** (3) I, II

A general course presenting the nature of man's physical universe with materials chosen from astronomy and physics. Not open to students who have had a high school course in physics with grades of A or B, a college course in physics or astronomy, or Physical Science 40.

**1B. Introduction to Physical Science** (3) I, II

Emphasis will be upon materials chosen from geology and chemistry to show the origins of natural materials and their use. Not open to students with a high school course in chemistry with grades of A or B, or a college course in chemistry or geology. Physical Science 1A not a prerequisite.

**10. Introduction to Photography** (3) I, II

A consideration of photographic optics and chemistry; nature of light and image formation; photographic emulsions, exposure and development. Composition and lighting. Will not satisfy laboratory requirements in physical science for the A.B. degree.

### Upper Division Courses

**110. Photography for Teachers** (3)

Designed for more mature students to learn photographic skills useful in teaching.

## PHYSICS

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in physics for the A. B. degree. Lower division requirements: Physics 4A-4B-4C; Mathematics 3A-3B, 4A-4B; Chemistry 1A-1B or their equivalents. Recommended: A reading knowledge of French or German. Upper division requirements: A minimum of 24 upper division units in physics including Physics 105A-105B, 110, three units chosen from 102 or 170, and 199 (two units). Six of the 24 units may be selected from a related field with approval of the student's departmental adviser.

A major in Physics is offered for the B. S. degree. The requirements are the same as those for the A. B. degree except, (1) no foreign language is required, and (2) the student's program must lead to a four year occupational objective approved by the physics department adviser for the B. S. degree.

A *teaching major* is offered in physics for the general secondary credential or as part of the general science major for the general junior high school credential or as part of the physical science major for the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in physics. The minor must include at least 15 units of work in physics, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in physics for the general secondary credential or as part of the *general science minor* for the general junior high, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

NOTE: A maximum of 12 units of lower division physics credit may be applied toward the A. B. or B. S. degrees.

**1A-1B-1C-1D. Principles of Physics**
(Discontinued. Equivalent course is 4A-4B-4C.)

**2A-2B. General Physics** (3-3) Year, I
This course is for liberal arts and certain pre-professional students who do not desire intensive physics preparation. Lectures, demonstrations and discussions. 2A, Properties of Matter, Mechanics and Heat. 2B, Electricity, Magnetism, Sound and Light. Prerequisite: Two years of high school mathematics.

**3A-3B. Physical Measurements** (1-1) Year, I
A laboratory course to accompany Physics 2A-2B. 3A: Properties of Matter, Mechanics and Heat. 3B: Electricity, Magnetism, Sound and Light. One three-hour laboratory per week. Prerequisite for 3A: Concurrent or previous registration in Physics 2A. Prerequisite for 3B: Concurrent or previous registration in Physics 2B.

**4A-4B-4C. Principles of Physics**
The following sequence of three courses is designed to give a thorough background in the fundamental principles of physics, with applications to practical problems. Each course three lectures and one three-hour laboratory per week.

**4A. Mechanics** (4) I, II
The mechanics of solids and fluids. Prerequisites: Credit for Mathematics 3A, or concurrent registration with permission of instructor. Not open to first semester freshmen.

**4B. Electricity** (4) I, II
Magnetism, electricity and elementary electronics. Prerequisite: Physics 4A.

**4C. Heat, Sound and Light** (4) I, II
Heat and elementary thermodynamics, sound and light. Prerequisite: Physics 4B.

**22. General Radio** (2) I
Theory of vacuum tubes and their applications to communication, television, and industry. This course may be taken for credit in addition to the maximum 12 units of lower division physics toward the A. B. or B. S. degree.

### Upper Division Courses

**102. Basic Electronics** (3) I
Principles of electron tubes and resistance loaded amplifiers. Negative feedback, and its application to regulated power supplies, cathode followers and direct coupled amplifiers. Prerequisite: Physics 4B or 1C.

**104. Communications** (3) II
Power amplifiers, oscillators, modulators and detectors. Radio transmitters and receivers for amplitude modulation and frequency modulation. Television systems. Antennas and radio wave propagation. Prerequisite: Physics 102 or permission of the instructor.

**105A-105B. Analytical Mechanics** (3-3) Year, I

Fundamental principles of Newtonian mechanics by elementary vector methods. 105A: Statics and kinematics of rigid bodies. 105B: Dynamical principles underlying linear and rotary motion of rigid bodies, with additional work in vibration and impact. Prerequisite: Physics 2A-2B or 4A and a working knowledge of calculus.

**106. Optics** (3) I

A study of reflection, refraction, dispersion, interference, diffraction, double refraction and polarization, with applications to optical instruments. Also wave propagation, radiation, spectra and the nature of light. Prerequisite: Physics 1D or 2B-3B or 4C.

**107. Electrical Measurement** (2) II

The theory and application of electrical measurements, including the measurements of current, voltage, power, resistance, capacitance and inductance. Stress on determination of probable errors of measurements. An hour lecture and a three-hour laboratory per week. Prerequisite: Physics 1C or 2B-3B or 4B and a working knowledge of calculus.

**110. Alternating Current Circuits** (3) I

The operator j applied to circuits containing resistance, capacitance and inductance; series and parallel resonance; coupled circuits; transients; practical circuit elements, networks. Prerequisite: Physics 4B and Mathematics 4A.

**112. Heat and Thermodynamics** (3) I (Offered in 1951-52)

A study of the thermal properties of matter with an introduction into the kinetic theory of gases and the laws of thermodynamics. Prerequisites: Eight units in physics and a working knowledge of calculus.

**114. Acoustics** (3) II (Offered in 1951-52)

A study of wave motion and its application to the production, transmission and reception of sound. Material in architectural acoustics, speech and hearing, and acoustical instruments is presented. Prerequisites: Physics 1C or 2B-3B or 4C.

**122. Electronics Laboratory** (2) I

An experimental study of electron tubes and their associated circuits. Study of cathode ray oscilloscope, vacuum tube voltmeter, characteristics of power supplies, amplifiers and filter systems. An hour lecture and a three-hour laboratory per week. Prerequisite: Previous or concurrent registration in Physics 102, or permission of instructor.

**124. Radio Measurements** (2) II

Laboratory measurements of the parameters of resonant circuits at radio frequencies. Study of the properties of oscillators, modulators, detectors and wave guides. An hour lecture and a three-hour laboratory per week. Prerequisite: Previous or concurrent registration in Physics 104.

**126. Optical Measurements** (2) I

An experimental study of lenses, optical systems and instruments, including the study of the wave character of light and the measurement of the wave length of light. An hour lecture and a three-hour laboratory per week. Prerequisite: Previous or concurrent registration in Physics 106, or permission of instructor.

**128. Experimental Atomic Physics** (2) I

Measurements of the specific charge and the charge of the electron. Measurements and analysis of data in radio activity, X-rays, cosmic rays, atomic spectra. Prerequisite: Previous or concurrent registration in Physics 158, or permission of instructor.

**132. Heat and Pyrometry Laboratory** (2) I (Offered in 1951-52)

Laboratory work selected from experiments in thermal expansion, specific heat, heat of combustion, radiation, calibration and use of various temperature measuring devices. An hour lecture and a three-hour laboratory per week. Prerequisite: Previous or concurrent registration in Physics 112, or permission of instructor.

**134. Acoustical Measurements** (2) II (Offered in 1951-52)

Experimental study of wave motion, velocity of sound in various media, diffraction, refraction and reflection of sound, microphone and loudspeaker characteristics. An hour of lecture and a three-hour laboratory per week. Prerequisite: Previous or concurrent registration in Physics 114, or permission of instructor.

**144. Acoustics of Music** (3) I

Fundamentals of acoustics and audition underlying musical phenomena presented in descriptive and nonmathematical terms. Prerequisite: A technical understanding of music.

**148. Introduction to Modern Physics** (3) II

A nonmathematical course covering recent developments in the field of physics, including X-rays, radio-activity, cosmic rays, atomic and nuclear energy. Prerequisite: Upper division standing. Not open to students who have credit for Physics 4A-4B-4C, or equivalent.

**152. Advanced Electronics** (2) I

Theory of vacuum tubes, ultra-high frequency systems and selected topics from contemporary electronics. Prerequisite: Physics 104.

**158. Atomic Particles** (3) II

A study of experimental evidence for the existence and properties of the elemental atomic and nuclear particles. Introduction to the fields of atomic and nuclear physics. Prerequisite: Physics 4A-4B-4C, or equivalent.

**160. Circuit Analysis** (3) II

A study of filter design, transmission lines, and network analysis. Prerequisite: Physics 110.

**166. Honors Course** (Credit to be arranged) I, II

An individual study arrangement for students admitted to the Honors Group. Enrollment through the department chairman, subject to the approval by the Committee on Honors. For requirements for admission to this group, refer to The Honors Group in the section on General Regulations.

**170. Electromagnetic Theory** (3) II

Electrostatics and magnetostatics treated by vector methods; chemical and thermal effects; motion of ions in electric and magnetic fields; magnetic field of a current; electromagnetic induction and radiation. Prerequisites: Physics 110, and a working knowledge of vector analysis and differential equations.

**199. Special Study** (1-2) I, II

Reading and laboratory work on a special problem in physics selected by the student. Each student will be assigned a member of the staff who will supervise his work. All candidates for the A.B. or B.S. Degree in physics are required to enroll for 2 units of this course during the upper division work. Credit, hours and topics to be arranged in each case.

## Graduate Courses

**200. Seminar** (2-2) Year, I, II

An intensive study of some phase of advanced physics.

A. Mathematical Physics
B. Theoretical Mechanics
C. Kinetic Theory of Gases
D. Advanced Acoustics
E. Advanced Electronics and Electricity
F. Electromagnetic Radiation
G. Atomic Physics
H. History of Physics
I. Fluid Mechanics

**290. Bibliography** (1)

Exercise in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a Master's project or thesis.

**298. Special Study** (1-3)

An individual study course designed primarily for candidates for the Master's degree.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis in physics for the Master's degree.

# PHYSIOLOGY

## IN THE DIVISION OF LIFE SCIENCES

*Major* and *minor* work are not offered in physiology. Courses in physiology, however, may be used as part of the major in zoology and are recommended as part of the lower division requirements for the major in psychology. For specific information, refer to these departments.

### Lower Division Courses

**1A. Human Physiology** (3) II

A lecture course considering the functions of the human body, and including a brief review of the microscopic and gross anatomy of the structures discussed. Prerequisites: Elementary chemistry and high school or college biology or zoology. Three hours of lecture per week. Credit reduced to 2 units, for students having credit for Zoology 20.

**1C. Human Physiology** (2) II

A study of the human functions through laboratory experiments and demonstrations. Prerequisites: Physiology 1A completed or in progress. Six hours of laboratory per week.

### Upper Division Courses

**101. General Physiology** (4) II

Fundamentals of plant and animal functions. Two lectures and two laboratory periods per week. Prerequisites: Biology 10A-10B or Zoology 1A-1B and Chemistry 1A-1B or Chemistry 2A-2B.

# POLITICAL SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in political science. This major consists of 36 units of work in political science and closely related work chosen from the fields of economics, geography, history, philosophy, psychology, and sociology. Under the direction of the chairman of the department, the 36 units will be distributed as follows:

(a) Required courses: Political Science 1A-1B and 71A-71B (one year-course of which should be taken in the lower division) and Political Science 199.

(b) Eighteen upper division units in political science distributed among two of the following group: Group I: Theory and government—courses numbered 100-139; Group II: Administration—courses numbered 140-149; Group III: International affairs—courses numbered 150-179.

(c) Six units of upper division work selected from the related fields listed above, this work to be chosen under the direction of the chairman of the department and to be outside the field of the student's minor.

Students majoring in political science are advised to become as familiar as possible with the related fields listed above. Majors should have a reading knowledge of at least one foreign language.

A *teaching major* is not offered in political science; however, courses in political science may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in political science. The minor consists of 15 units of work, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in political science for the general secondary credential; however, courses in political science may be used as part of the *social science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. Refer to the outlines of requirements for these credentials.

## Lower Division Courses

**1A. Introduction to Government** (3) I, II

Theories and principles of government, with special attention to the problems created by modern industrialism and population pressures.

**1B. Introduction to Government** (3) I, II

A comparative survey of selected foreign governments: Their constitutional principles, political institutions, and governmental problems.

**71A-71B. Introduction to American Government and Politics** (3-3) Year, I, II

Semester I: Governmental organization in the United States; the federal system; the organization, powers and functions of the legislative, executive and judicial branches of the government; the relations between federal, state and local units of government.

Semester II: Expansion of governmental functions and the development of means of democratic control; an examination of the increased use of government as an instrument of social control; the history, motivation, methods and control of political parties; nominations, elections and minority groups; pressure politics.

NOTE—Not open to freshmen.

## Upper Division Courses

**101. American Institutions** (3) I

The principles of the Constitution of the United States of America, and a survey of the political and social institutions which have developed under the Constitution.

**105. American Political Thought** (3) II

A survey of the development of American ideas concerning political authority from the period of colonial foundation to the present time.

**111A-111B. Theory of the State** (3-3) Year, I

The nature of the state, its organization and activities, and its relation to the individual and to other states. Special attention is given to recent developments in the field of political thought. Not open to students with credit in Philosophy 111A-111B.

**120. Political Parties** (3) I

A critical analysis of the political party as a part of the process of government; party organization and activities; nominating and campaign methods; theories and functions of the party system; party responsibility. Special emphasis will be placed upon the function of the two-party system in American government.

**121. Basic Factors in American Politics** (3) I

An analysis of American political, legal, economic, and social factors in their relation to our political system and the public interest.

**122. Propaganda and Public Opinion** (3) II

A study of the forces which mold the American public mind, the practice of propaganda, a description and analysis of public relations, pressure groups and their effect in American public life.

**136. Administrative Law** (2) I

The law of public office and public officers, powers of administrative authorities, scope and limits of administrative powers, remedies against administrative action.

**137A-137B. Constitutional Government** (2-2) Year, I

Modern government and politics; its theoretical foundations, institutions and problems. Emphasis will be on American experience with useful comparisons with other countries. Either semester may be taken first.

**139A-139B. American Constitutional Development** (3-3) Year, I, II

A study of the work of the Convention of 1787 and of significant phases of American constitutional law. Not open to students with credit for History 172A-172B.

**140A-140B. Principles of Public Administration** (3-3) Year, I

Semester I: The administration of public services, staff and line functions, theories of organization and practices, and procedures of different types of governmental agencies.

Semester II: Principles and problems in governmental budgeting, performance and capital outlay, budget procedures, organization and administration of personnel programs, controls over administrative behavior, responsible bureaucracy and professionalism in the public services. Not open to students with credit in Political Science 147A-147B.

**142. State Government** (3) II

A study of the political structure and its operation used in the carrying on of the functions exercised by the states; state-federal relations; state-local government relations; particular emphasis on California government.

**143. Municipal and County Government** (3) I

A study of the organization and its operation used to carry into effect the functions assigned to local governmental units; particular emphasis upon local government in California.

**144. Introduction to Public Personnel Administration** (2) I

An introduction to the field, giving general coverage of the problems involved in recruitment, placement, supervision, etc., of public employees. Prerequisite: Permission of instructor.

**145. Public Personnel Management** (2) II

An advanced course involving detailed examination of management of personnel in public service. Prerequisite: Permission of instructor.

**146. Wage and Salary Administration** (3) I

Problems of job analysis; major techniques of job evaluation, including ranking, classification, point system, factor comparison; problems of wage and salary administration, incentive pay methods; merit rating plans. Not open to students with credit for Commerce 154.

**147A-147B. Public Administration** (2-2) Year, I

Administrative organization. Relationship between federal, state, and local governments. Budget, personnel, management, and control. Not open to students with credit for Political Science 140A-140B.

**148. The Government of Metropolitan Areas** (2) I

A study of the governmental problems of metropolitanism; overlapping of governments, services, planning and financing. The use of intergovernmental contracts for public service, proper public service areas, and special authorities.

**150A-150B. International Relations** (3-3) Year, I, II

An historical and analytical consideration of the basic factors—historic, geographic, economic, ideologic, and strategic—which underly and condition the modern conflict between the "sovereign state" and the "community of nations." Fall semester: Origins and development through the nineteenth century. Spring semester: Twentieth century experimentation and conflict.

**151SP. The Contemporary World** (1) II

A series of lectures by members of the faculty on selected problems of the current international scene. Reports required of students enrolled for credit.

**152. International Organization** (3) I

A critical analysis of the organization by which the international community seeks to provide for the exercise of legislative, administrative and judicial functions on the international level: Diplomatic and consular corps; conferences; administration through commissions and unions; amicable procedures for settlement of disputes; The League of Nations-United Nations experiment.

**153. Principles of International Law** (3) I

The function of law in the international community. The historical development of the ideas and rules of international law and their place in the modern diplomatic and legal structure.

**154. International Law and the Courts** (3) II

A case study of the application of the rules of international law in national and international courts.

**158A-158B. American Foreign Policy** (3-3) Year, I

Lectures and reading in the field of American foreign relations since 1776, with special emphasis, in the second semester, upon affairs since 1900. A general survey course. Not open to students with credit for History 176A-176B.

**160. Government of the British Dominions** (3) II

Development of the new British Empire and imperial relations of the self-governing dominions; government of Canada, Australia, New Zealand, and South Africa; conditioning historical, economic and racial factors. Not open to students with credit for History 156B.

**162. Government of England** (3) I

The structure and functioning of English parliamentary system with emphasis upon present day political principles and parties.

**165. Governments of Latin America** (3) II

The governments of leading and representative Latin American states. Emphasis on the background and evolution of current political institutions and philosophies.

**167. Government of the Soviet Union** (3) I

Theory and practice of government in the Soviet Union, with some attention to Russian foreign affairs.

**198. Special Studies in Government** (2-6) I, II

Directed study and research in the field of government. Admission by permission of the instructor.

**199. Special Studies in Political Science** (3) I, II

Directed study in research techniques in the field of political science. Limited to Political Science majors.

### Graduate Courses

**200A-200B. Seminar in Government** (2-2) Year, I, II

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized biliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)

An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

## PSYCHOLOGY

### IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in psychology. Two plans are provided: One for those students expecting to pursue the study of psychology beyond the A.B. degree; the other for those students who wish to extend their general education in the field of psychology.

The lower division requirements for all majors are: Psychology 1, 5, and 6; 6 units in biology, physiology, and/or zoology; 3 units in philosophy; and 6 units in anthropology and/or sociology.

The upper division requirements for each major will be determined by the plan selected by the student, but a minimum of 24 upper division units in psychology is required for a major.

A *teaching major:* A major in psychology may be combined with two teaching minors for a general secondary credential. Refer to the outline of requirements for this credential.

### Minor

A *minor in arts and sciences* is offered in psychology. The minor must include at least 15 units of work in psychology, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in psychology.

### Plan A Major

Plan A is for a non-professional major in psychology and is designed to provide the student with a greater understanding of his expanding group relations leading to happy and effective family and community living. The recommended pattern of courses for this program is not designed to facilitate graduate and professional study in psychology.

The upper division requirements for Plan A majors: Psychology 106, 131, 145, and electives to complete the major. It is expected that each student under Plan A will select, with the assistance of his adviser, a pattern of courses in line with his particular objectives in pursuing Plan A. For most students in Plan A, the following courses will be found particularly helpful: Psychology 105A, 107, 122, 132, 150, and 152.

To facilitate the purpose of Plan A the following courses in other departments are recommended as electives: Anthropology 1A-1B; Biology 1 or Zoology 1A-1B; Economics 1A-1B and 102; Health Education 90; Philosophy 1A-1B; Zoology 114 and 165; and courses in home economics.

### Plan B Major

The purpose of Plan B is to facilitate the specific preparation of those students who wish to pursue graduate and professional preparation in Clinical, Industrial and Personnel, and Theoretical-Experimental Psychology. To this end, three separate programs are suggested under Plan B to provide an undergraduate basic preparation for further study in these fields.

Upper division requirements for all Plan B majors: Psychology 104A, 105A, 160A or 160B, and additional courses to complete the major selected from one of the groups listed below. For each of the three patterns of special preparations under Plan B, the following courses are recommended:

*Pre-clinical:* Psychology 105B, 106, 131, 145, 150, 151, 152, 160A. The following courses are recommended in other departments: Anthropology 1A-1B; Biology 10A-10B, or Physiology 1A and 1C; Philosophy 1A-1B or 3A-3B, 20, and 129; Sociology 105 and 135; Speech Arts 176 or 179A-179B; and Zoology 165. A natural science minor is recommended.

In selecting courses and choosing electives, the student is urged to consult his adviser and the Bulletin on the requirements for special secondary credentials for school psychometrist and for correction of speech defects.

*Industrial and Personnel:* Psychology 121, 122, 131, 132, 145, 152, 160B. The following courses are recommended in other departments: Commerce 130A, and 153; Economics 1A-1B, 100A, 150, 151, 185, and 170; Philosophy 20; Political Science 144, and 145; Sociology 50, 51; and 6 units selected from Sociology 105, 135, 180, 190; and Speech Arts 2A; a minor in commerce, economics, political science, or sociology is recommended.

*Theoretical-Experimental:* Psychology 104B, 131, 140, 145, 150, 160A, 160B, and 177. The following courses are recommended in other departments: Chemistry 2A-2B; Foreign Language; Mathematics 1, 3A, and 3B; Philosophy 1A, and 20; Physics 2A-2B, and 3A-3B; Physiology 1A and 1C; Zoology 1A-1B, 100, and 165. A mathematics or natural science minor is recommended.

### The Master of Arts Degree

The Master of Arts Degree is offered in the Department of Psychology as a part of the fulfillment of requirements for the School Psychologist credential only. Refer to the outline of requirements for this degree and credential in the section on Professional Curricula in Education.

### Lower Division Courses

NOTE—Courses in psychology may not be used to meet any part of the 12-unit social science requirement, nor may they be used as part of a social science major or minor.

**1. General** (3) I, II

An introduction to some of the facts, principles, and concepts which are basic to understanding human behavior.

**5. Principles of Psychology: Basic Organization of Behavior** (3) I, II

The basic sensory, neural and motor mechanisms and their functions in human behavior. Prerequisite: Psychology 1 and sophomore standing.

**6. Principles of Psychology: Learning and Integrated Behavior** (3) I, II

Attending, perceiving, and learning, including social learning, personality development, and conditions of efficient work. Prerequisite: Psychology 1 and sophomore standing.

**11. Applied Psychology** (3) I, II

A survey of the application of the basic principles of psychology to business, education, industry, government, law, medicine and related fields. Prerequisite: Psychology 1.

**12. Mental Hygiene** (3) I, II

An examination and interpretation of the factors which go into the making of the person as he adapts himself to the social world about him. The development of the normal personality. Prerequisite: Psychology 1.

## Upper Division Courses

**104A. Statistical Methods in Psychology** (3) I, II

An introduction to the use of quantitative methods in psychology, with emphasis upon measures of central tendency and variability, graphic methods and percentiles, linear correlation, and the applications of the normal probability curve. Prerequisite: Psychology 1. Not open to students with credit for Economics 140 or Sociology 103.

**104B. Advanced Statistics** (3) II

A further study of quantitative methods in psychology with particular emphasis on methods of correlation, chi-square, and contingency, and an instruction to the analysis of variance. Prerequisites: Mathematics C and Psychology 104A, or permission of instructor.

**105A. Introduction to Psychological Testing** (3) I, II

The basic principles of testing. The selection and critical evaluation of group tests of intelligence, personality, aptitude, interest and achievement. Prerequisite: One of the following courses: Psychology 5, 11; Education 102A, 102D. Not open for credit to students with credit for Education 105A.

**105B. Individual Mental Testing** (3) II

The principles of individual testing. Instruction and practice in the administration of the Stanford-Binet and similar tests. Prerequisite: Psychology 105A and permission of instructor.

**106. Developmental Psychology** (3) I, II

A study of the psychological development of the normal individual from conception through childhood, adolescence, maturity, and old age. Stress is laid upon the interdependence of the various periods of the individual's life. Prerequisite: Psychology 1.

**107. Psychology of Later Maturity** (3) II

The psychological, physiological, and sociological factors influencing behavior in the later years of life. Prerequisite: Psychology 1.

**121. Personnel and Industrial Psychology** (3) I, II

Psychological principles applied to problems of selection and assignment of industrial personnel, employee training, and fatigue. Prerequisite: Psychology 104A, or Economics 140, or Sociology 103.

**122. Public Opinion Measurement** (3) II

The history, methods, and problems of public opinion and attitude measurement. Emphasis will be placed upon the polling of consumers and voters. Students will be given field experience.

**130. Educational Psychology** (2) I, II

To develop understanding of the applications of psychological research for effective classroom teaching. Observation and field work required. Prerequisite: Psychology 1. Not open to students with credit for Education 130.

**131. Foundations of Personality** (2) I

The human organism in its interaction with the environment and the resultant changes in the development of the personality. Prerequisite: One full year of psychology or equivalent.

**132. Personality Adjustment** (2) II

The appliction of the fundamental principles of personality to problems of adaptation. Mental hygiene as a local, state, and national problem. Prerequisite: Psychology 131 or permission of instructor.

**140. Physiological Psychology** (3) I, II

The neurophysiological basis of behavior, with particular attention to the psychophysiology of sensory and motor processes, emotion, bodily needs, and learning. Prerequisite: Psychology 5 and 6, or 10 units in biological sciences.

**145. Social Psychology** (3) I, II

The major problems and findings concerning processes of social interaction, group behavior and group membership, and the socialization of the individual. Prerequisite: Psychology 1. Not open to students with credit for Sociology 145.

**150. Abnormal Psychology** (3) I, II

The psychology of behavior disorders, with emphasis on the amentias, neuroses, and psychoses. Prerequisite: One full year of psychology.

**151. Introduction to Clinical Appraisal** (3) I

A study of diagnostic devises in psychology, tests of clinical significance, ratings, interviewing for securing information. Projective and case study analyses; problems of insight, rapport, empathy, and prediction of individual behavior. Prerequisites: One of the following: Psychology 105A, 106, 131, 140, or 150.

**152. Introduction to Methods of Counseling** (3) II

An introduction to problems and methods of counseling and adjustment. The utilization of psychological principles and techniques in dealing with various types of guidance situations. Prerequisite: Enrollment limited to senior and graduate students in psychology or pre-social work.

**160A. Experimental Psychology** (3) I, II

Demonstrations of the principles and conditions of learning, perceiving, problem solving, and thinking. Methodology and design of experiments. Two laboratory sessions and one seminar period per week. Prerequisite: Psychology 5, 6, and 104A.

**160B. Experimental Psychology** (3) I, II

Demonstration of laws governing various sensory experience and motor activities. Experiments in space perception, errors of judgment, and conditions of work and fatigue. Two laboratory sessions and one seminar period per week. Prerequisites: Psychology 5 and 6.

**166. Honors Course** (to be arranged) I, II

A special study arrangement for students admitted to the Honors Group. Enrollment through the Department Chairman, subject to the approval by the Committee on Honors. (See Honors Group under General Regulations.)

**170. Comparative Psychology** (3) I

A study of the behavior of animals with a view to gaining a better understanding of human behavior. An analysis of the leading experimental work on senory discrimination, learning, and intelligence of each animal group, from amoeba to man. Prerequisites: Psychology 5 and 6.

**177. History of Psychology** (3) II

A survey of the historical background of modern psychology. Limited to psychology majors with senior standing.

**199. Individual Studies in Psychology** (1-3) I, II
Limited to students in the senior year. Permission to enroll must be obtained from a member of the staff. Credit limited to 3 units.

### Graduate Courses

**201. Seminar** (2)
A review, integration, and supplementation of the student's knowledge of psychology.

**205. Advanced Mental Testing** (3)
The theory of mental testing and a comprehensive survey of the various verbal and nonverbal individual mental tests.

**211. Advanced Clinical Psychology** (3)
A seminar and practicum in directive and nondirective counseling. The theory of and experience in the use of techniques available to the clinical psychologist.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)
An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

## RECREATION

### IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

Major work is not offered in recreation. Students desiring a concentration in this field should refer to the Recreation Curriculum in the section of the bulletin entitled: Preprofessional and Vocational Curricula.

### Minor

A *minor in arts and sciences* is offered in recreation. Lower division requirements: Four semesters of physical education activity courses and in addition a minimum of 6 lower division units to include Physical Education 51, 53, and electives chosen from Art 6B or fields of dance, drama, or music. Upper division requirements: A minimum of 9 units, including Physical Education 165, 170A-170B, and 184A. Consultation with the Chairman of the Division of Health, Physical Education, and Recreation is advised.

A *teaching minor* in recreation is offered for the junior high school and special secondary credentials. Students with a major in physical education may use this minor as second minor only. For specific information, refer to the outlines for these credentials.

## ROMANCE LANGUAGES

### IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in romance languages. Lower division requirements: French 1, 2, 3, 4, 5, 6, and Spanish 1, 2, 3, 4, 5, 6; History 4A-4B or History 8A-8B (for those who emphasize Spanish in the upper division). Upper division requirements: A minimum of 24 upper division units, of which no less than 9 shall be in one language, including French or Spanish 199.

A *teaching major* in romance languages is offered for the junior high and general secondary credentials. For specific information, refer to the outline of requirements for this credential.

### Minor

A *minor in arts and sciences* is not offered in romance languages, but minors may be taken in French or Spanish.

*A teaching minor* in foreign languages, including romance languages, is offered for the general junior high school, special secondary, and general elementary and kindergarten-primary credentials. Teaching minors are offered in French and Spanish for the general secondary credential. For specific information, refer to the sections in the bulletin under Majors and Minors for these credentials.

## SOCIAL SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* in social science is offered. Lower division requirements: 6 units in each of three of the following fields, the selection to be made on advice of the division adviser: (1) Economics, (2) geography, (3) history, (4) political science, and (5) sociology-anthropology. Upper division requirements: Complete a minimum of 30 units selected with the approval of the division adviser, as follows: Upper division courses to the extent of 6 to 15 units in each of three fields, provided that one of these fields be different from the fields selected for lower division work, and a 199 course.

A *teaching major* is offered in social science for the junior high school, and general secondary credentials. For specific information, refer to the outlines for these credentials.

### Minor

A *minor in arts and sciences* is not offered in social science.

A *teaching minor* in social science is offered for the junior high school, special secondary, and general elementary and kindergarten-primary credentials. For specific information, refer to the outlines for these credentials.

## SOCIOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in sociology. Lower division requirements: Sociology 50 and 51. Upper division requirements: A minimum of 24 upper division units in sociology, including Sociology 103, 110, 135, 152, 153, and 173 or 174.

A *teaching major* is not offered in sociology; however, courses in sociology may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in sociology. The minor must include at least 15 units of work in sociology, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in sociology for the general secondary credential; however, courses in sociology may be used as part of the *social science minor* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**50. Contemporary Social Problems** (3) I, II

Survey of modern social problems recognizing the sociological factors involved. Emphasis on the scientific method of approach. An evaluation of various causes and solutions of problems. A prerequisite for upper division courses in Sociology. Sophomore standing required. Not open to students who have credit for Social Science 40.

**51. Principles of Sociology** (3) I, II

The development and use of the concepts applied to sociological analysis; the effects of isolation and social contacts, interaction, processes, forces, controls, collective behavior and social progress. A prerequisite for upper division courses in Sociology. Sophomore standing required. Prerequisite: Sociology 50.

### Upper Division Courses

**103. Elementary Social Statistics** (3) I, II

Analysis and presentation of elementary material in the fields of sociology and social work. Tabular and graphic presentation, analysis of frequency distributions, trends, simple correlation, sampling and reliability techniques. Prerequisites: Mathematics A-B and Sociology 50 and 51. Mathematics C or 7A recommended. A prerequisite for most upper division sociology courses. Not open to students who have credit for Economics 140 or Psychology 104A or 104B.

**110. Race Relations** (3) I

A study of the Negro, Oriental, and other minority groups in the United States. A study of mental capacities, education, cultural achievement, family life, delinquency and other social factors of each group. Race prejudice, racial consciousness, theories of racial superiority and inferiority will be considered. Prerequisite: Sociology 50, 51.

**120. Industrial Sociology** (3) II

Analysis of group relationships within economic organizations. Problems of leadership, morale and conflict. Some attention to the sociology of occupations and professions. Prerequisites: Sociology 50, 51.

**135. Marriage and the Family** (3) I, II

Preparation for marriage. Prediction scales for evaluating success or failure in marriage. Parent-child relationships; factors in successful and unsuccessful marriages; higher education and the birth rate; married women in industry and professions; desertion and divorce. Not open to students who have credit for Sociology 45, or Home Economics 135. Prerequisite: Sophomore standing.

**145. Social Psychology** (3) I, II

Personality as it develops in relation to social environment. Suggestion, imitation, leadership, the crowd, public opinion, social control, prejudice, propaganda, sex differences, race differences. Prerequisites: Psychology 1, 11, Sociology 50, 51. Not open to students who have credit for Psychology 145.

**152. History of Social Thought** (3-3) Year, I

The origin and development of social theory in Europe and America; consideration of the fields and specialization and research in contemporary American sociology. Prerequisite: Sociology 50, 51.

**153. Modern Social Theory** (3-3) Year, II

A study of theories basic to modern sociological research, including the viewpoints of European and American thinkers. Prerequisites: Sociology 50, 51, and 152.

**170. Social Pathology** (3) I

Survey of many alleged abnormal phenomena in society as seen in society today in various forms of individual, family, community and world disorganization, such as crime, prostitution, extreme alcoholism, migratory workers, divorce, revolution and war.

**173. Criminology and Penology** (3) I

The extent and characteristics of crime; consideration of physical, mental, economic, and sociological causes of crime; study of methods of penal discipline, prison labor, parole, and probation; programs of prevention. Prerequisite: Sociology 50, 51.

**174. Juvenile Delinquency** (3) II

The nature and extent of delinquency; the causative factors involved; methods of control and prevention, with special attention to the protective and remedial measures offered by the school, home, Juvenile Court, correctional institutions and camps, probation and parole, and recreational agencies. Prerequisite: Sociology 50, 51, or permission of the instructor.

**180. Population Problems** (3) I

Problems of population increase, migration, shifts in composition of population relative to age, sex, and racial distribution. Population practices and theories. Biological and geographical aspects of population problems. International population movements. Prerequisite: Sociology 50, 51 and 103.

**185. Community Welfare Organization** (3) II

An analysis of the structure and process of community organization for social welfare as well as the functional relationships between public and private welfare agencies. Field work will be required to study some of the social agencies of San Diego. Prerequisite: Sociology 50, 51 and Sociology 103, or permission of instructor.

**187. Urban Sociology** (3) I, II

A study of the structure and function of the modern city; types of neighborhoods; forms of recreation; social forces in a metropolitan area; types of urban personalities and groups; rural-urban conflicts of culture. Practical field studies required. Prerequisite: Sociology 50, 51 and 103.

**190. Fields of Social Work** (3) I, II

A survey of the nature of social work and the various kinds of social work which are found in the modern urban life. The student is familiarized with the various social agencies in the community, their problems and methods of work, by readings and field trips. Volunteer social work in some social agency recommended. Prerequisites: Sociology 50, 51, and 103.

**199. Special Studies** (1-3) I, II

Limited to students in the senior year. Permission to enroll must be obtained from a member of the staff. Credit limited to three units.

### Graduate Courses

**200A-200B. Seminar** (2-2)

**230. Principles of Social Case Work** (3) I

A study of the principles and practices of social case work; problems of case recording and analysis. Directed field work and case studies. Prerequisites: Sociology 190 or Psychology 152 or Education 233.

**231. Field Work in Social Case Work** (3) II

Supervised practice in local social work agencies. Prerequisite: Sociology 190 and 230.

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)

An individual study course primarily for candidates for the master's degree.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

## SPANISH

### IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *major in arts and sciences* is offered in Spanish. Lower division requirements: Spanish 1, 2, 3, 4, 5, 6; French 1, 2, or German 1, 2, or Latin 1, 2; History 4A-4B or 8A-8B. Upper division requirements: A minimum of 24 upper division units, at least 21 units of which must be in Spanish, including Spanish 199. The remaining three units may be selected from Geography 116, 118, 119, 120; History 161, 162; Political Science 165; or Comparative Literature 101A, 140A-140B, 152A-152B, 155, 158, 159, in consultation with the Chairman of the Department. An average of C grade or better is required in upper division major courses.

A *major in arts and sciences* is offered in Romance Languages. For specific information, refer to Romance Languages in the section on Announcement of Courses.

A *teaching major* is offered in Spanish or Romance Languages for the junior high school and general secondary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in Spanish. The minor must include at least 15 units of work in Spanish, 9 units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in Spanish for the general secondary, the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credential. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1. Elementary** (3) I, II

Pronunciation, oral practice, readings on Spanish culture and civilization, minimum essentials of grammar.

**2. Elementary** (3) I, II

Continuation of Spanish 1. Prerequisite: Spanish 1 or one year of high school Spanish.

**2, 3, 4, 5.** Will take the place of Spanish C, D, in the Fall semester of 1951.

**10. Conversation** (2) I

Practice in the spoken language; practical vocabulary; conversation on assigned topics; simple dialogues and plays. Prerequisite: Spanish A or two years of high school Spanish.

**11. Conversation** (2) II

Continuation of Spanish 10. Prerequisite: Spanish 10, Spanish B or three years of high school Spanish.

**15. Spanish Civilization** (2) I

The major currents and characteristics of Hispanic life and culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

**16. Spanish Civilization** (2) II

Continuation of Spanish 15. No prerequisite.

**B. Elementary** (5) I (Offered for last time in Fall of 1950)

Intensive study of Spanish grammar and syntax, with daily written work; class drill in conversational idiom and pronunciation; reading with oral discussion and resumes; dictation; introduction to contemporary prose writers. Students who have had two years of Spanish in high school should register for Spanish B for which only four units will be allowed. For specific information, consult the chairman of the department.

**C-D. Intermediate Spanish** (3-3) Year, I (Offered for last time in Spring of 1951)

Reading and composition: Study of standard prose as basis for class work; collateral reading in prose and drama, with written reports in Spanish; dictation. Class work conducted mainly in Spanish. Individual conferences. Prerequisite for C: Spanish B or three years of high school Spanish. Prerequisite for D: Spanish C or four years of high school Spanish.

**50. Spanish Commercial Correspondence** (3) I

(Offered in Fall of 1950 and every two years thereafter)

A one-semester intermediate course in Spanish composition, directed along the line of commercial correspondence. A practical course, with translation of business letters, and supplementary reading in Spanish on commercial subjects. Prerequisite: Three years of high school Spanish, or completion of Spanish B. This course may substitute for Spanish C in the C-D sequence.

**70. Spanish for Elementary-School Teachers** (3) II
Elementary Spanish to meet the needs of elementary-school teachers. Emphas on the oral aspects of the language with reading centering around Mexico. Open onl to students enrolled in the general elementary school curriculum. Prerequisite: Tw years of high school Spanish or one year of college Spanish or permission of instructo

### Upper Division Courses

**101A-101B. Conversation and Composition** (3-3) Year, I
Translation into Spanish of moderately difficult English prose passages. Fre composition in Spanish. Outside reading of modern Spanish plays, with writte reports in Spanish. Oral practice in colloquial Spanish with extensive use of phon graph recordings. Prerequisite: Spanish D, or its equivalent, with grade of C.

**102A-102B. Introduction to Spanish Classics** (3-3) Year, I (Offered in 1952-53
Reading from several types of classical literature. Lazarillo de Tormes an other novels of Roguery; selections from Don Quixote, and the Cien Mejores Poesia Castellanas; one drama each from the works of Lope de Vega, Calderon, Alarco and Moreto; collateral reading and reports. Prerequisite: A grade of C in Spanish or permission from the instructor.

**104A-104B. Spanish-American Literature** (3-3) Year, I
Reading from representative Spanish-American authors during the colonia revolutionary and modern periods. Lectures, class reading, collateral reading an reports. Prerequisite: A grade of C in Spanish D or permission from the instructo Students who do not read Spanish may take this course for credit in comparativ literature, doing the required reading in English translation.

**105A-105B. Modern Spanish Drama** (3-3) Year, I
The development of the drama of Spain from the beginning of the nineteent century to the present time. Prerequisite: A grade of C in Spanish D or permissio from the instructor.

**110A-110B. Novel and Short Story in Spain** (3-3) Year, I
The development of the novel and short story in Spain from 1830 to th present time. Prerequisite: A grade of C in Spanish D or permission from th instructor.

**150. Spanish Phonetics** (3) II
A theoretical and practical study of Spanish phonetics. A study of vowels, consonants, isolated words, and phonic groups. The principles of versification, and exercises in intonation. Especially recommended for prospective teachers of Spanish. Prerequisites: Grade of C in Spanish D, or permission of the instructor.

**199. Comprehensive Reading and Survey Course** (3) II
Designed to fill up the gaps in the reading done in courses. Class meeting onc a week for guidance, reports, and quizzes. Required of all seniors majoring in Spanish

### Graduate Courses

**Spanish 201. Old Spanish** (2) I
A study of the language and literature of Spain from the 12th to the 15th centuries.

**Spanish 204. Seminar in Spanish-American Literature** (2) II
Intensive investigation of some phase of Spanish-American literature. A single country, an author, or some special problem will be studied and reported upon.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)
An individual study course designed primarily for candidates for the Master's Degree.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the Master's Degree.

# SPEECH ARTS

## IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *major in arts and sciences* is offered in speech. Lower division requirements: A minimum of 15 units of lower division courses in speech arts, specializing in the field of dramatic art, radio, public speaking or a guided combination of the three. Upper division requirements: A minimum of 24 upper division units including Speech Arts 150; 6 units selected from 155, 140A-140B, 179A-179B, 192A-192B (the first semesters of any of these courses may be combined); 6 units selected from 181, 182, 183 or 184, 159A-159B, 161 and 191, or combinations of the first semesters of any of these courses; 6 units selected from 152, 154A, 154B, 108, 118A, 176, 192A, 192B.

A *teaching major* is offered in speech for the general secondary and the special secondary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in speech. The minor must include at least 15 units of work in speech arts, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is offered in speech for the general secondary, the general junior high school, and the special secondary credentials. It may be offered only as a second teaching minor for the general elementary and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**A. Speech for Communication** (2) I, II

Primarily for those who have not passed the speech test. Training in communication, obtaining and organizing material, and drill in enunciation, pronunciation, vocabulary and oral grammar. Individual laboratory practice for specific speech problems.

**1. Voice and Diction** (3) II

Exercises and drills to improve the quality, flexibility and effectiveness of the speaking voice leading to good usage in standard American speech. Preparatory to further courses in public speaking and dramatic art.

**2A. Fundamentals of Public Speaking** (3) I, II

Training in fundamental processes of oral expression; method of obtaining and organizing material; outlining principles of attention and delivery; practice in construction and delivery of type forms of speech.

**2B. Extemporaneous Speaking (or Forum Speaking)** (3) I, II

Practice in extemporaneous speaking on subjects of current interest, both national and local, with stress laid on the organization and delivery of content material. Forum discussion will provide speakers with the opportunity of assembling facts quickly to meet such questions as any audience situation might demand.

**11A. Interpretation** (3) I, II

Application of the principles involved in "making words come alive": Response to thought and mood, sensory association, emphasis, climax. Practice selections in poetry and prose.

**11B. Interpretation** (3) I, II

Oral reading of various types of material suitable for popular audiences: Stories, humorous sketches, light and sentimental verse. Prerequisite: 2A or 11A or 55A.

**20. Remedial Speech** (1) I, II

Corrective laboratory training prescribed on the basis of vocalization tests made on recording machine. Required of education majors who fail to meet speech requirements tests. Private assistance given to stutterers and lispers.

**54. Stage Make-Up** (2) I

Practice in the application of stage make-up including straight and character. Two laboratory periods per week.

**55A. Elementary Acting** (3) I, II

Speech and pantomime applied to the problems of characterization in group scenes. This course is concerned with the discovery and development of talent and the appreciation of the actors' problems for directors and teachers.

**55B. Intermediate Acting** (3) I, II

Continuation of 55A emphasizing more emotional material from longer scenes. Some one-act plays will be produced from this class. Prerequisite: 55A or previous training.

**56A-56B. Dramatic Production** (3-3) Year, I

A general survey of play production planned to present the whole organization of the college and school theater, with emphasis on backstage practice, stagecraft, and elementary lighting. Crews for the departmental productions are organized in this class. Prerequisite: 55A or permission of the instructor is prerequisite for 56B.

**57. Elementary Stage Costume** (3) II

A study of pattern drafting, draping, color harmony and the use of fabrics for stage costuming. Students will receive practical training in the construction of stage costumes. Two lecture-demonstration and recitation hours and one laboratory per week.

**60A-60B. Argumentation and Debate** (3-3) Year, I, II

Obtaining and organizing of evidence and the construction and use of the brief; study and discussion of current issues; the presentation of formal and informal debates. Attention to intramural and intercollegiate debating.

**61A-61B-61C-61D. Intercollegiate Debate** (1-1-1-1) I, II

**63A-63B-63C-63D. Verse Choir** (1-1-1-1) I, II

Participation in verse speaking chorus to develop quality, range of tone, and ability in dramatic visualization of poetry.

**81. Survey of Radio** (3) I, II

A course presenting the background, theory, and fundamentals of radio broadcasting. The subject material includes history of broadcasting; types of radio programs; broadcast operation.

**82. Radio Announcing** (3) I, II

The fundamentals of radio announcing. Class time will be divided between lecture and laboratory practice of announcing styles. Voice training for radio will be stressed. Prerequisite: Speech Arts 81.

**83. Radio Acting and Directing** (3) II

For students interested in the production of dramatic radio programs. Lecture and laboratory for radio techniques in characterization. The use of sound effects and music cues and bridges will be considered. Emphasis will be on production analysis. Actors for Radio Guild productions will be taken from this class. Prerequisite: Speech Arts 81.

## Upper Division Courses

**108. Advanced Interpretation** (3) I, II

Analysis of techniques of literary composition as guides to oral interpretation. Achievements of the creative artist as they affect the interpretative artist. Prerequisite: 11A or 11B or permission of instructor.

**118A-118B. Playwriting** (3-3) Year, I

The first semester deals with the one-act play and its technique. Plays are analyzed and creative writing is encouraged. New plays are read and discussed in class during their period of development. Some of the plays will be produced. The second semester continues with analyses of long plays and students continue creative writing. Prerequisite: 118A or permission of the instructor is prerequisite for 118B.

**120. Readings in Dramatic Art** (3) II

This course will deal with dramatic materials in which the student will study complete plays for interpretation and characterization without memorization and acting techniques.

**140A-140B. Stage Design** (3-3) Year, I, II

The application of the principles of design, color and perspective to the design of settings for the production of period and modern plays. Students will learn to make sketches and models and paint the scenery for the departmental productions. Prerequisite: 56A-56B or permission of the instructor.

**145. Stage Lighting** (3) II

For directors, designers and technicians in school and community theaters concerning the principles and practice of light, color, lighting instruments, and control equipment, including the design and planning of lighting of plays. Students will serve as light crews for departmental production.

**150. Phonetics** (3) I, II

Auditory and kinesthetic analysis of the sounds of the English language. Valuable as a corrective course in pronunciation and articulation. Required of speech majors and those seeking the Speech Correction Credential.

**152. History and Design of Costume** (stage) (3) II

A study of costume from Egypt to the present. Emphasis on the use of historical costumes on the stage. Costume designs for one stage production. Drawing and painting experience desirable but not necessary.

**154A-154B. History of the Theater** (3-3) Year, I, II

A study of the theater from primitive times to the present. Special attention will be given to the theater as a mirror of the social and cultural background of the various countries and periods in which it is studied. Carries aesthetics credit. (Speech Arts 154B may be taken without 154A.)

**155. Advanced Acting** (3) I

Problems in characterization: Acting styles of the Elizabethan and Eighteenth Century periods. Prerequisite: 55A-55B or the equivalent.

**156. Advanced Dramatic Production** (3) Summer

Problems and projects in scenery and lighting in connection with the workshop and major productions of the department.

**159. Stage Direction** (3) I

Planned for prospective directors of plays in schools, colleges and community theaters. Through lectures, discussions, and exercise projects the student will become acquainted with the principles, procedure and methods of stage direction. Each student will be required to direct several short plays during the course.

**160. Directed Laboratory** (1) I, II

This will consist of experience in directing a one-act play before a departmental or public audience. It may be taken with or it may be preceded by 159. Prerequisite or corequisite: 159. May be repeated once for credit.

**161A-161B-161C-161D.** Advanced Intercollegiate Debate (1-1-1-1) I, II

**162. Advanced Argumentation** (3) I

Presents a further and more detailed study in the preparation of briefs and the organizing of evidence; opportunity for participation in intramural debates, intercollegiate debate, and community speaking activity. Prerequisite: 2A or 2B.

**163A-163B-163C-163D. Advanced Verse Choir** (1-1-1-1) I, II

Participation in verse speaking chorus to develop quality, range of tone, and ability in dramatic visualization of poetry.

**166. Honors Course**

See The Honors Group under General Regulations.

**176. Problems of Speech Correction and Articulation** (3) II

Analysis and discussion of the major articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Not open to students with credit for Education 176.

**177. The Teaching of Lip Reading** (2)

History, theory and methods of lip reading. Aids for the classroom teacher; program and materials of instruction for the specialized teacher. Opportunities for practice teaching are offered. Not open to students with credit for Education 177.

**179A-179B. Nervous Speech Disorders** (3-3) Year, I

Clinical survey of newest methods of speech correction with special emphasis given to stammering. Required course for Special Corrective Credential. Not open to students with credit in Education 179A-179B. (Speech Arts 179A is a prerequisite for 179B.)

**181. Radio Sales and Advertising** (3) I, II

A study of advertising trends in radio advertising; time buying, audience survey, and program types in relation to products to be advertised via radio broadcasting. Includes publicity and promotion of radio programming organization of a radio station; relationship between the business and entertainment factors of radio broadcasting. Open to students with consent of instructor.

**182. Advanced Radio Production** (3) II (Offered in 1951-52 and alternate years)

Advanced radio production techniques. Students are responsible for the execution of Radio Guild productions. Projects in program types include the use of sound and music. Material includes production analyses and script editing. Prerequisite: Speech Arts 83.

**183. Radio News Writing and Broadcasting** (3) II

Correlates news editing and writing with announcing styles. Radio news procedure and organization of a radio news staff; analysis of reportorial and commentary styles. Includes production techniques of "on-the-spot" and multiple point pickup broadcasts. Registration with permission of instructor.

**184. Radio Writing** (3) II

Includes original half-hour scripts, play or novel adaptations for radio, and the documentary program. Study of pacing and timing, the use of sound and music for bridges and cues, and radio format. Plays written by students are read and discussed during their development; the better plays to be produced by the Radio Guild for broadcast. Open to students with consent of instructor.

**191. Organized Discussion** (3) II

Consideration of the symposium, the panel, the open forum, the business session, and varieties of conference speaking. Emphasis upon organization and presentation. Attention to parliamentary procedure for informal groups. Prerequisite: Speech Arts 60 or equivalent.

**192A-192B. Advanced Public Speaking** (3-3) Year, I, II

Careful attention given to the preparation and delivery of longer speeches, using as models classics in the field of oratory. Prerequisite: 2A or 2B.

**199. Special Problems in Speech and Dramatic Art** (1-3) I, II

## Graduate Courses

**200. Seminar in History of Oratory** (2) II

An advanced course for those already familiar with the techniques and theories of public speaking and debate. A history of public address from the time of Greece up to the present, organized around the theories of representative orators and their relationships to the social environment.

**221. Articulatory Problems of Speech** (2) I

Analysis and discussion of articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Prerequisite: Speech Arts 150.

**245. Seminar in Technical Practice** (2)
Advanced technical projects in planning school theaters and their mechnical equipment, lighting control and lighting instruments and the design of lighting layouts for elaborate plays will be assigned, executed and discussed.

**259. Seminar in Stage Direction** (2)
An advanced course for those who are ready to direct full-length plays and to consider the problems of handling various styles and types of drama in the great periods of dramatic literature for modern production. For graduates with experience in directing plays.

**260. Seminar in Oral Interpretation** (2)
Aesthetic discipline applied to oral reading of masterpieces of poetry and prose. Analysis of thought and emotional content and aesthetic form, including unity and harmony, variety and contrast, balance and proportion, rhythm.

# ZOOLOGY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in zoology. Lower division requirements: Zoology 1A-1B; Chemistry 1A-1B or 2A-2B. Recommended: German or French; Botany 1. Upper division requirements: A minimum of 24 upper division units, at least 18 units of which must be in zoology and 6 units of which may be in related courses in botany, chemistry, physics, physiology, or bacteriology selected with approval of the departmental representative.

A *teaching major* is not offered in zoology; however, courses in zoology may be used as part of the *life science major* for the general secondary credential or as part of the *general science major* for the general junior high school credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in zoology. The minor must include at least 15 units of work in zoology, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in zoology; however, it may be used as part of the *teaching minor in life science* for the general secondary credential, or as part of the *teaching minor in general science* for the general junior high school, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. General Zoology** (4-4) Year, I, II
An introduction to animal biology. Designed for those who expect to do advanced work. Two lectures and 6 hours of laboratory work each week. Students who have credit for Biology 10B do not receive credit for Zoology 1A. Prerequisite for Zoology 1B: Biology 10B or Zoology 1A.

**8. Human Anatomy** (3) I
A study of human structure through the use of models, prepared dissections and microscope slides. Prerequisite: High school biology, Biology 10A, 1, or Zoology 1A. Two hours of lecture and three hours of laboratory per week. Required of prenursing students. Credit reduced to 2 units if student has credit for Zoology 20.

**20. Human Anatomy and Physiology** (3) II
An elementary course in human anatomy and physiology. Prerequisite: High school biology, or Biology 1 or 10A or Zoology 1A. Lectures three hours per week. Credit reduced to 2 units if student has credit for Zoology 8 or Physiology 1A.

## Upper Division Courses

**100. Embryology** (4) I, II

The development of vertebrates as illustrated by the frog, chick, and pig. Six hours of laboratory and two hours of lecture and quiz per week. Prerequisite: Zoology 1B or Biology 10B.

**101. General Physiology** (4) II

Fundamentals of plant and animal functions. Two lectures and two laboratory periods per week. Prerequisites: Biology 10A-10B or Zoology 1A-1B, Chemistry 1A-1B or Chemistry 2A-2B.

**104. Microtechnique** (3) I, II

Introduction to methods of preparation of tissues for microscopic study. Six hours of laboratory and one hour of lecture per week. Prerequisite: One year college chemistry and Zoology 1A-1B, Botany 2A-2B or Biology 10A-10B.

**106. Comparative Anatomy of the Vertebrates** (4) I

Dissection, study and comparison of organ systems of typical vertebrates. Two hours per week of lecture and six hours of laboratory. Prerequisite: Zoology 1B or Biology 10B.

**108. Histology** (4) I

A study of the microscopic structures and differentiation of tissues and organs of the vertebrates, especially mammals. One lecture and six hours of laboratory per week. Prerequisites: Zoology 1A-1B, or Biology 10A-10B; recommended Zoology 100.

**109. Hematology** (3) I, II

Microscopic and chemical examination of blood. One lecture and two laboratory periods per week. Prerequisite: Chemistry 102.

**110. Limnology** (4) II

A biological survey of available fresh waters, followed by a selected problem on the relationship of an organism or group of organisms to the environment. Prerequisites: Zoology 1A-1B and elementary chemistry.

**112. Marine Invertebrates** (4) I

Identification and study of behavior and life histories of invertebrates of the San Diego region. Frequent collecting trips to the beaches required. Prerequisite: Zoology 1A or Biology 10B. Two hours of lecture and six hours of laboratory or field work per week.

**113. Ornithology** (4) II

The study and identification of birds, especially those of the Pacific Coast and the San Diego region. One hour of lecture and six hours per week of laboratory, or field excursions, and a field project. Prerequisite: Zoology 1B or Biology 10B.

**113F. Field Ornithology** (1) I

A field study of local birds with special emphasis upon the fall migration.

**115. Cold-blooded Vertebrates** (3) II

The classification, natural history and distribution of fishes, amphibians, and reptiles. Practice in the techniques of collection and the use of keys for identification. Frequent field trips. One lecture and two laboratory periods per week. Prerequisites: Zoology 1B or Biology 10B.

**118. Mammalogy** (3) II

Lectures on classification, adaptations, and ecological relationships of mammals. Laboratory and frequent field trips to familiarize students with local mammals, taxonomic procedures and field techniques. One lecture and six hours of laboratory per week. Prerequisites: Zoology 1A or Biology 10B.

**119. Field Zoology** (4) Summer

Designed to give a working knowledge of the animals of Southern California; field trips, lectures and laboratory emphasizing ecology, behavior, observational methods, collecting techniques and taxonomy. Prerequisite: A course in college biological science or permission of instructor.

**121. General Entomology** (3) I

The classification, life history, structure, and physiology of insects. Prerequisite: Zoology 1A or Biology 10B. Two hours of lecture and three hours of laboratory per week.

**122. Systematic Entomology** (1-2) II

Classification of insects with especial emphasis on a group of insects of the student's choice. To be taken with or to follow 121. May be repeated for credit but with a total of not more than 3 units. Three to six hours of laboratory work each week.

**125. Economic Entomology** (4) II

Course designed for students of agriculture and horticulture. Emphasis is placed on determination and control of insects affecting plants. Quarantine measures are also studied. Two lectures and two laboratory periods per week. Prerequisite: Zoology 1A or Biology 10B.

**126. Medical Entomology** (3) I

The role of insects and other arthropods in transmission and causation of human diseases. Three hours of laboratory and two hours of lecture per week. Prerequisite: Zoology 1A or Biology 10B.

**128. Parasitology** (4) I

Study of animal parasites with special reference to those of man. Laboratory including identification of important parasites of man, and collection and preservation of local forms. Two hours of lecture and six hours of laboratory per week. Prerequisite: Biology 10A-10B or Zoology 1A-1B.

**150. Readings in Biology** (2) II

Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles, ecology, economic zoology, zoogeography, breeding habits, animal behavior. Not open to students who have credit for Botany 150.

**153. Economic Biology** (2) I

Study of uses of plants and animals to man and their destructive effects. Consideration also given to general methods of control and conservation. Prerequisite: Zoology 1A, Biology 1, or Biology 10B. Not open to students who have credit for Botany 153.

**155. Genetics** (2) II

Principles of plant and animal genetics. Primarily for science majors. Two lectures per week. Not open to students with credit for Botany 155. Prerequisites: Biology 10A-10B, Zoology 1A-1B or Botany 2A-2B.

**156. Genetics Laboratory** (2) II

Experiments and demonstrations illustrating the mechanism of heredity in plants and animals. Six hours of laboratory per week. Prerequisite: Zoology 155 or Botany 155, or concurrent registration in either. Not open to students with credit for Botany 156.

**160. Evolution** (2) II

The development of theories of evolution. Two lectures per week.

**165. Human Heredity** (2) I

Presentation of selected principles of heredity as related primarily to human inheritance. Designed primarily for nonscience majors. Two lectures per week. Not open to students with credit for Zoology 155 or Botany 155.

**199. Special Study** (1-2) I, II

Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least 15 units of zoology with a grade of A or B.

## Graduate Courses

**200. Seminar** (3) I

Especial emphasis will be placed on current concepts in the various fields of biology including problems of migration, distribution, speciation, evolution. Required of all graduate students.

**202. Hydrobiology** (2) II

A course in aquatic ecology with special emphasis on fresh water but with reference to marine biology.

**213. Advanced Studies in Ornithology** (2) I

Lectures and seminar on advanced problems of morphology, distribution, behavior and classification of birds.

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (2-5)

An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

# PROVISIONAL CURRICULUM

This curriculum is for the purpose of assisting provisional students in attaining regular status in a curriculum which leads to the A.B. degree. Students in the provisional program are given close supervision in selection of courses and are placed in classes specially designed to aid in adjustment to the college program.

Reclassification to regular status may be obtained upon the completion of at least 24 units of work of "C" grade with an over-all grade point average of 1.0, or upon recommendation of a reclassification committee. Reclassification must ordinarily take place within the first year of college work. Students who do not so reclassify will be placed on probation. (See Probation and Disqualification.)

The courses in the provisional curriculum are open only to students in provisional status. Provisional students in their first college year must select three courses each semester from the list of subjects in the provisional curriculum. All other courses selected to complete the student's program may be chosen from the regular schedule of courses or from additional courses in the provisional curriculum with the approval of the adviser.

## A SUGGESTED PROGRAM FOR PROVISIONAL STUDENTS

| First Year | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| * English 41, English Composition, and 42, Freshman Literature | 3 | 3 |
| Physical Science 40, Man and His Physical World, or equivalent (see lower division requirements.) | - | 3 |
| Biology 40, Man and His Biological World, or equivalent (see lower division requirements.) | 3 | - |
| Social Science 40, Contemporary Problems | 3 | - |
| Sociology 45, Marriage and the Family | - | 3 |
| Health Education 21, Principles of Healthful Living | - | 2 |
| Psychology 40, Psychology and Life | 3 | - |
| Physical Education (activity courses) | ½ | ½ |
| Elective | 3 | 4 |
| | 15½ | 15½ |

## COURSES OF INSTRUCTION

### BIOLOGY

**40. Man and His Biological World** (3) I, II

General concepts of biology; living, reproduction, inheritance, evolution. Biology in action; scientific methods, scientific atitudes, contributions of biologists. Man as a biological animal; his biological needs, his place in the biological world. One demonstration and three lecture periods per week. Equivalent of Biology 1.

### ENGLISH

**40. English Fundamentals**

Elements of composition. Drill in grammar, usage, vocabulary building, reading skills, theme writing. Course credit is equivalent to passing English A qualifying examination and may be counted toward graduation as an elective, but does not satisfy lower division English requirements. Equivalent of English A.

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* Students who do not pass the English A qualifying examination must register in English 40, Pre-College English, which is a prerequisite for English 41. Credit in English 40 may be counted toward graduation as an elective but not to satisfy lower division English requirements.

**41. English Composition** (3) I, II

Composition stressing exposition. Reading from essays and articles. Prerequi sites: Passing mark in English A qualifying examination or credit for English 40 Equivalent of English 1.

**42. Freshman Literature** (3) I, II

Literature, mainly contemporary, is read for its ideas, especially in relation t human problems and their solution. Practice in writing is continued. Required of al Provisional students. Prerequisite: English 41. Equivalent of English 2.

## PHYSICAL SCIENCE

**40. Man and His Physical World** (3) I, II

A general education course concerning the nature of the scientific method an selected topics in physical science. Materials will be chosen from physics, chemistry astronomy, and geology to provide an understanding of the relations of physical scienc to modern life. Equivalent of Physical Science 1A.

## PSYCHOLOGY

**40. Psychology and Life** (3) I, II

An elementary survey of normal adult psychology, descriptive and organiza tional; the subjective and objective aspects of behavior. Furnishes basis for all othe courses in psychology and is prerequisite therefor. Equivalent of Psychology 1.

## SOCIAL SCIENCE

**40. Contemporary Problems** (3) I, II

A survey of political, social and economic forces with background material fo understanding human problems. Equivalent of Sociology 50.

**45. American Democracy** (3) II

The democratic concept of self-government, its background and growth, with a emphasis on the American use of democratic principles. Includes a study of democrac in a relative and comparative approach to our modern world and other forms of goverr ment. Satisfies the U. S. Constitution requirement for graduation.

## SOCIOLOGY

**45. Marriage and Family** (3) I, II

Emphasizes preparation for successful marital adjustment by presenting mat rials that will help students learn to solve their own courtship, marriage, and famil problems.

# DIRECTORY

## 1949-50

| | |
|---|---|
| HEPNER, WALTER R.<br>Ed.D., University of Southern California. 1935.* | President |
| HARDY, EDWARD L. (Retired 1935)<br>B.L., University of Wisconsin; M.A., University of Chicago; LL.D., La Verne College. 1910.* | President |
| ACKLEY, JOHN WILLIAM<br>A.M., and two years of graduate study at the University of Southern California. 1947.* | Assistant Professor of Speech Arts |
| ADAMS, EILEEN (Mrs. Bert)<br>A.B., Willamette University; B.S., University of Denver. 1949.* | Junior Librarian |
| ADAMS, JOHN R.<br>Ph.D., University of Southern California. 1928.* | Professor of English |
| ALCORN, MARVIN DOUGLAS<br>Ed.D., University of Southern California. 1941.* | Associate Professor of Education |
| AMSDEN, GEORGIA C.<br>Diploma, Gregg College, Chicago; special secretarial training in various colleges. 1925.* | Associate Professor of Commerce |
| ANDERSON, GRAYDON K.<br>Two years of graduate study at University of Minnesota and University of Wisconsin. 1949.* | Assistant Professor of Economics |
| ANDREWS, JULIA GETHMAN<br>M.A., Columbia University; two and one-half years of graduate study at Teachers College, Columbia University. 1947.* | Assistant Professor of Art |
| APPLE, JOE ALTON<br>Ed.D., Teachers College, Columbia University. 1947.* | Associate Professor of Education |
| ATKINSON, DAVIS F.<br>M.A., and one-half year graduate study at Stanford University. 1949.* | Instructor in Commerce |
| AULT, JESSE W. (Retired 1948) | Dean of Professional Education<br>Professor of Education |
| BACON, GUINIVERE KOTTER (Mrs. George)<br>M.A., Stanford University. One year graduate study at Stanford University, Teachers College of Columbia University, University of Southern California, and University of California at Los Angeles. 1928.* | Associate Professor of Education |
| BAIRD, OSCAR<br>M.A., University of California. Three years graduate study at University of Minnesota, University of California, University of Southern California, University of Oregon. 1921. | Professor of Physics |
| BAKER, CLIFFORD H., JR.<br>M.A., University of California. Four years graduate study, University of California. 1937.* | Instructor in Spanish |
| BALLANTINE, FRANCIS A.<br>Ph.D., University of Michigan. 1949.* | Assistant Professor of Education |
| BARNHART, KENNETH EDWIN<br>Ph.D., University of Chicago. 1939.* | Professor of Sociology |
| BAUM, DONALD ELWOOD<br>M.A., University of Iowa. 1947.* | Assistant Professor of Music |
| BECKER, CALLIE D. (Mrs. E. J.)<br>A.B., Emory University. 1946.* | Senior Librarian |
| BELL, GERTRUDE S. (Retired 1938) | Professor of Psychology |

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* Date of appointment.

BENTON, CARL WEBBER--------------------Instructor in Physical Education
B.S., University of California at Los Angeles. 1948.*

BIRCH, AILEEN J. (Mrs. C. E.)--------------------Instructor in Education
A.B., San Diego State College. 1949.*

BLOCK, EDWARD A.--------------------Associate Professor of English
Ph.D., University of California. 1946.*

BROADBENT, HARRY H.--------------------Assistant Professor of Physical Education
A.B., University of Oklahoma; one and one-half years of graduate study at the University of Pennsylvania. 1949.*

BROOKS, BAYLOR--------------------Assistant Professor of Geology
B.A., Stanford University. Two years graduate study at University of Arizona and Stanford University. 1931.*

BROWN, ELIZABETH McPIKE (Mrs. L. P.)--------------------Professor of French
Ph.D., University of Chicago. 1926.*

BROWN, EUGENE P.--------------------Assistant Professor of Commerce
M.A., University of Oklahoma. One year graduate study at University of Chicago, University of Southern California and University of Mexico. 1947.*

BROWN, LESLIE PARKER--------------------Professor of Spanish and French
Ph.D., University of Southern California. 1922.*

BRUNER, WILLIAM S.--------------------Assistant Professor of English
M.A., Claremont Colleges. 1948.*

BRYDEGAARD, MARGARET A. (Mrs. H)--------------------Associate Professor of Education
M.A., and graduate study, Claremont Colleges. 1936.*

BURNETT, GAIL ALLEN--------------------Assistant Professor of English
Ph.D., University of Southern California. 1947.*

CAMERON, ROY ERNEST--------------------Professor of Economics
Ph.D., University of California. 1929.*

CAMPBELL, LOIS BERYL--------------------Assistant Professor of Education
M.A., Teachers College, Columbia University. 1947.*

CARLSON, HILDING B.--------------------Associate Professor of Psychology
Ph.D., University of Chicago. 1948.*

CARLSON, THORSTEN ROBERT--------------------Principal of Campus Laboratory School;
Ph.D., University of Minnesota. 1948.* Associate Professor of Education

CASSEL, RUSSELL N.--------------------Assistant Professor of Education
D.Ed., University of Southern California. 1949.*

CAVE, MARY F.--------------------Assistant Professor of Physical Education
B.S., University of North Dakota; one-half year's study at Bennington College. 1946.*

CHADWICK, LEONARD E.--------------------Assistant Professor of Economics
B.S., and two and one-half years of graduate study at the University of California. 1949.*

CHOPLIN, ROSA MARIA (Mrs. Ralph)--------------------Acting Instructor in Spanish
A.B., University of California at Los Angeles; one year graduate study at University of Southern California. 1948.*

CHURCHILL, CHARLES W.--------------------Assistant Professor of Sociology
Ph.D., New York University. 1949.*

COLLINS, MYRON D.--------------------Lecturer in Music
Diplomas, University Extension Conservatory, Chicago; extensive private instruction. 1948.*

COMIN, NORITA (Mrs.)--------------------Acting Assistant Professor of Home Economics
B.S., University of Minnesota. 1949.*

CORBETT, KATHERINE E.--------------------Associate Professor of Education
M.A., Teachers College, Columbia University. 1921.*

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* Date of appointment.

CORRIGAN, ROBERT FORD — Assistant Professor of Speech Arts
M.A., University of Iowa. 1947.*

CROUCH, JAMES ENSIGN — Professor of Biology
Ph.D., University of Southern California. 1932.*

CUNKLE, ELIZABETH CLARK (Mrs. LaChance) — Junior Librarian
B.S., Columbia University. 1948.*

CUNNINGHAM, CORNELIUS CARMAN — Associate Professor of Speech Arts
Ph.D., University of Iowa. 1947.*

DEBRECHT, EUGENE F. — Director of Extension Service
M.A., Stanford University. 1949.* Assistant Professor of Commerce

DEHNEL, PAUL A. — Acting Instructor in Biology
M.A., University of California. 1948.*

DEPUTY, ERBY CHESTER — Professor of Education
Ph.D., Columbia University. 1931.*

DICKHAUT, FLORENCE LILLIAN SMITH (Mrs. Charles A.)
M.A., University of Chicago. 1917.* Professor of English

DIRKS, JOHN H. — Instructor in Art
B.A., San Diego State College; one-half year of graduate study at the University of Southern California. 1947.*

DURR, IRMA SUE (Mrs. Robert L.) — Junior Librarian
B.S., George Peabody College. 1949.*

EAGLE, JOHN E. — Associate Professor of Mathematics
Ed.D., Stanford University. 1946.*

EARNEST, SUE W. (Mrs. L. E.) — Assistant Professor of Speech Arts
Ph.D., University of Southern California. 1947.*

EELLS, KENNETH W. — Associate Professor of Psychology
A.B., Ph.D., University of Chicago. 1949.*

EMERSON, ARTHUR T. — Acting Assistant Professor of Mathematics
B.S., U. S. Naval Academy; one year graduate study at Naval War College. 1947-1948, 1949.*

ENGLANDER, HERMAN S. — Acting Instructor in Mathematics
B.S., California Institute of Technology. 1947.*

EVENSON, PATTEE E. — Associate Professor of Music
M.M., University of Michigan; specialized training at Universities of Minnesota, Rochester, and Southern California; private instruction in Paris, London and the United States. 1949.*

FELTON, JOHN R. — Assistant Professor of Economics
M.A., and one and one-half years of graduate study at the University of California. 1948.*

FERRIS, HORACE G. — Instructor in Physics
Ph.D., University of California. 1949.*

FOLSOM, HANNAH W. — Instructor in English
M. A., Wellesley College; one and one-half years of graduate study at University of California. 1947.*

FOLSOM, MARK P. — Acting Assistant Professor of Journalism
A.B., and one year graduate study at University of California at Los Angeles and the University of Arizona. 1949.*

FRIEDRICH, KURT — Assistant Professor of Education
Ed.D., Columbia Teachers College. 1949.*

GELDREICH, EDWARD W. — Assistant Professor of Psychology
M.A., 1935, University of Cincinnati; three years graduate study at the University of Chicago. 1947.*

GENERALES, MINOS D. — Associate Professor of Political Science
Degree in Law and Political Science, including six years of graduate study at the University of Athens, University of Paris Law School and Institute of International Studies. 1949.*

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* Date of appointment.

GERMANN, LULA ---------- Senior Librarian
B.S., State Teachers College, Hays, Kansas. 1926.*

GIBSON, ERNEST DANA ---------- Associate Professor of Commerce
Ed.D., New York University. 1947.*

GJERDE, CLAYTON M. ---------- Assistant Professor of Education
M.A., and two years of graduate study at the University of Minnesota. 1948.*

GLEASON, JOHN MORTIMER ---------- Assistant Professor of Mathematics
M.A., University of California. One and a half years graduate study at University of Southern California, University of California at Los Angeles and Claremont Colleges. 1930.*

GRESS, IRVIN S. ---------- Assistant Professor of Psychology
M.Ed., University of Pittsburgh. Two years graduate study at Columbia University, Pennsylvania State College and University of Pittsburgh. 1946.*

GROSS, GEORGE C. ---------- Acting Instructor in English
A.B., San Diego State College; one year graduate study at San Diego State College and University of Southern California. 1949.*

GULICK, SIDNEY L., JR. ---------- Professor of English
Ph.D., Yale University. 1945.*

HALLEY, ROBERT ---------- Acting Instructor in Mathematics
M.A., University of California at Los Angeles. 1949.*

HAMMACK, EDITH CHASTAIN ---------- Associate Professor of Education
B.A., San Jose State College. 1911.*

HAMMACK, ISABELLA STEWART ---------- Associate Professor of Education
M.A., University of California. One-half year graduate study at University of California. 1936.*

HARCLEROAD, FRED F., JR. ---------- Director of Secondary Education and Audio-Visual Education; Associate Professor of Education
Ph.D., Stanford University. 1946.*

HARRINGTON, AWONA B. ---------- Junior Librarian
M.S., University of Southern California. 1949.*

HARRINGTON, NEIL J. ---------- Acting Instructor in Chemistry
B.S., Monmouth College; one year of graduate study at DePaul University and Northwestern University. 1948.*

HARVEY, ALBERT R. ---------- Assistant Professor of Mathematics
Ph.D., Harvard University. 1949.*

HARVEY, DOROTHY R. (Mrs. F. A.) ---------- Assistant Professor in Botany
M.A., University of Southern California. One year graduate study at University of Southern California and University of Chicago. 1924.*

HARWOOD, ROBERT DANIEL ---------- Professor of Zoology
Ph.D., Cornell University. 1928.*

HASKELL, HARRIET ---------- Assistant Professor of English
Ph.D., University of Wisconsin. 1940.*

HAVER, CLARE L. (Mrs. R.) ---------- Acting Instructor in Education
A.B., Western Washington College of Education. 1949.*

HAYNES, GERALDINE K. (Mrs. Lloyd) ---------- Senior Librarian
B.S., University of Illinois. 1931.*

HISCOX, ETHEL M. ---------- Assistant Professor of Music
M.A., New York University. Voice study with Lila Robeson and Herbert Witherspoon of New York Metropolitan Opera Co. 1947.*

HOUSEMAN, RICHARD A. ---------- Associate Professor of Education
Ed.D., Teachers College, Columbia University. 1948.*

HOUSER, LOWELL D. ---------- Associate Professor of Art
Diploma, Chicago Art Institute. Five years' special study in Mexico, Yucatan, Haiti, and New York City. 1938.*

HUNTER, JAMES J., JR. ---------- Professor of Education
Ph.D., Syracuse University. 1946.*

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* Date of appointment.

ISENSEE, ROBERT W. .......... Assistant Professor of Chemistry
Ph.D., Oregon State College. 1948.*

JACKSON, EVERETT GEE .......... Professor of Art
Three years special study in Mexico. M.A., 1939, University of Southern California. 1930.*

JACOBSEN, HELEN M. .......... Senior Librarian
B.S., University of California. 1946.*

JOHNSON, FRANK LOUIS .......... Associate Professor of English
Ph.D., University of Wisconsin. 1939.*

JOHNSON, MYRTLE (Retired 1946) .......... Professor of Biology

JONES, KENNETH K., JR. .......... Instructor in Speech Arts
M.A., Stanford University. 1948.*

JOSEPH, LIONEL .......... Assistant Professor of Chemistry
Ph.D., Washington University. 1947.*

KALBFELL, DAVID C. .......... Assistant Professor of Physics
Ph.D., University of California. 1948.*

KAMM, MADGE E. .......... Assistant Professor of Education
M.A., Teachers College, Columbia University. 1947.*

KAPLAN, OSCAR J. .......... Associate Professor of Psychology
Ph.D., University of California. 1946.*

KASCH, FREDERICK W. .......... Assistant Professor of Physical Education
M.S., University of Illinois; one-half year of graduate study at New York University. 1948.*

KEENEY, JOSEPH SUMNER .......... Professor of English
Ph.D., University of California. 1933.*

KENNEDY, CHESTER B. .......... Associate Professor of English
Ph.D., University of California. 1937.*

KIDWELL, WILLIAM M. .. Director of Placement; Assistant Professor of Psychology
Ed.D., Stanford University. 1949.*

KITZINGER, ANGELA M. .......... Assistant Professor of Health Education
M.A., Teachers College, Columbia University. Year of additional work at Central School of Hygiene and Physical Education and at Folk High School, Ollerup, Denmark. 1945.*

KLAPP, ORRIN E. .......... Assistant Professor of Sociology
Ph.D., University of Chicago. 1948.*

LAMDEN, CHARLES W. .......... Associate Professor of Commerce
Ph.D., University of California. Certified Public Accountant. 1946.*

LAURITSEN, WILLIAM H. .......... Professor of Health Education
Ph.D., Ohio State University. 1947.*

LEBARRON, EVANGELINE O. .......... Assistant Professor of Commerce
B.A., University of Iowa. One and one-half years of graduate work at Claremont Colleges, University of Southern California, University of Minnesota and University of Hawaii. 1946-48, 1949.*

LEIB, JULIUS .......... Associate Professor of Music
Three years special study at Leipzig Conservatory. 1938.*

LEIFFER, DONALD B. .......... Professor of Political Science
Ph.D., Harvard University. 1948.*

LEMME, MAURICE M. .......... Associate Professor of Mathematics
Ph.D., Purdue University. 1948.*

LEONARD, CHARLES B. .......... Professor of History
Ph.D., University of California. 1921.*

LESLEY, LEWIS B. .......... Professor of History
Ph.D., University of California. 1924.*

---

* Date of appointment.

LINLEY, JAMES .......... Assistant Professor of Education
Ph.D., University of Southern California. 1945.*

LIVINGSTON, GEORGE R. (Retired 1949) .......... Professor of Mathematics
M.A., University of California. One year graduate study since 1922 at University of California, University of California at Los Angeles and University of Southern California. 1921.*

LOCKMAN, EVELYN .......... Assistant Professor of Physical Education
M.A., George Peabody College; one year of graduate study at the University of Wisconsin and New York University. 1948.*

LUCE, LAWRENCE W. .......... Acting Instructor in Industrial Arts
M.S., Stout Institute. 1949.*

LUCIO, WILLIAM HOWARD .......... Director of Elementary Education; Professor of Education
Ph.D., University of California. 1939.*

MADDEN, RICHARD .......... Dean of Education; Professor of Education
Ph.D., Columbia University. 1939.*

MARCHAND, ERNEST L. .......... Professor of English
Ph.D., University of Wisconsin. 1946.*

McBLAIR, WILLIAM .......... Acting Instructor in Biology
B.A., San Diego State College; one year of graduate work at the University of California. 1948.*

McCLINTIC, JOSEPH O. .......... Professor of Economics
Ph.D., University of Wisconsin. 1946.*

McCOLLOM, IVAN N. .......... Director of Summer Sessions; Professor of Psychology
Ed.D., Colorado State College of Education. 1946.*

McGAUGHEY, JANET M. (Mrs. J. R.) .......... Assistant Professor of Music
B.M., M.M., University of Michigan. 1947.*

McLONEY, WIRT L. .......... Instructor in Physical Science
M.A., Colorado State College of Education. 1949.*

MENDENHALL, MARY .......... Dean of Women; Professor of Philosophy
Ph.D., Yale University. 1939.*

MERRILL, JOHN E. .......... Assistant Professor of History
A.M., Harvard University. Two years graduate study at Stanford University. 1946.*

MERZBACHER, CLAUDE FELL .......... Instructor in Chemistry
M.A., Claremont Graduate School. Licensed Professional Chemical Engineer. 1947.*

MESSIER, LEONARD N. .......... Assistant Professor of French
Ph.D., University of California. 1946.*

MILLER, DOROTHY A. .......... Acting Instructor in Chemistry
M.S., State University of Iowa. 1947.*

MILNE, DAVID S. .......... Associate Professor of Sociology
Ph.D., University of Chicago. 1946.*

MOE, CHESNEY R. .......... Professor of Physics
Ph.D., University of Southern California. 1931.*

MOLITOR, VINNIE CLARK (Retired 1938) .......... Associate Professor of Geography

MOORE, EDWENA B. (Mrs. E. J.) .......... Instructor in Education
B.A., San Diego State College; one year graduate study at Claremont Colleges. 1947.*

MORGAN, CHARLES .......... Instructor in Engineering
M.S., University of California. 1949.*

MYERS, MABEL A. .......... Associate Professor of Biology
Ph.D., Cornell University. 1946.*

NASATIR, ABRAHAM PHINEAS .......... Professor of History
Ph.D., University of California. 1928.*

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* Date of appointment.

NICHOLS, AMBROSE R., JR. — Associate Professor of Chemistry
Ph.D., University of Wisconsin. 1939.*

NIEBAUER, RUBY R. — Assistant Professor of Education
M.S., University of Wisconsin. 1949.*

NORLAND, CALVERT E. — Instructor in Biology
M.S., University of California. One and one-half years graduate study at University of California; one and one-half years graduate study at Claremont Colleges. 1947.*

OLSON, ANDREW C., JR. — Assistant Professor of Biology
M.S., University of Idaho. One year graduate study at University of California. 1946.*

OSBORN, CLARENCE G. — Professor of History and Political Science
Ph.D., Stanford University. 1928,1929, 1937.*

PEASE, GLENN R. — Acting Assistant Professor of Psychology
Ph.D., State University of Iowa. 1947.*

PEIFFER, HERBERT C., JR. — Dean of Students; Professor of Psychology and Guidance
Ph.D., Stanford University. 1937.*

PEREZ, ROSE MARIE — Junior Librarian
M.A., University of Chicago. 1948.*

PERRY, FAY V. (Mrs. J. M.) — Director of Guidance for Provisional Students; Professor of Sociology
Ed.D., University of Southern California. 1936.*

PETERSON, CHARLES E. — Dean of Men; Professor of Physical Education
M.A., Claremont Colleges. 1921.*

PFAFF, PAUL LEWIS — Associate Professor of Speech Arts
M.A., University of Southern California. Two years study at University of Southern California. 1931.*

PHILLIPS, GEORGE L. — Assistant Professor of English
Ph.D., Boston University. 1947.*

PHILLIPS, WALTER THOMAS — Professor of Spanish
Ph.D., University of Southern California. 1927.*

POST, LAUREN CHESTER — Professor of Geography
Ph.D., University of California. 1937.*

POVENMIRE, E. KINGSLEY — Associate Professor of Speech Arts
M.F.A., Yale University. 1946.*

PRESTON, DUDLEY A. — Assistant Professor of Biology
Ph.D., University of Minnesota. 1948.*

RAGEN, KATHERINE M. — Assistant Professor of History
Ph.D., University of Wisconsin. 1947.*

RENSHAW, MORTON J. — Coordinator, Personnel Services Center; Assistant Professor of Psychology
Ph.D., Stanford University. 1948.*

RICHARDSON, M. BRUCE — Lecturer in Engineering
A.B., Aeronautical Engineer, Stanford University. Registered Mechanical Engineer. 1948.*

RICHARDSON, ROBERT W. — Professor of Geography
Ph.D., University of California. 1939-1942, 1948.*

ROBERTS, ELLIS E. — Instructor in Physical Science
Ph.D., Stanford University. 1949.*

ROBINSON, DUDLEY HUGH — Professor of Chemistry
Ph.D., University of Southern California. Registered Chemical Engineer. 1928.*

ROBINSON, EVELYN L. — Assistant Professor of Physical Education
M.S., University of Southern California. 1946.*

ROGERS, SPENCER LEE — Professor of Anthropology
Ph.D., University of Southern California. 1930.*

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* Date of appointment.

ROHFLEISCH, KRAMER J. .......... Associate Professor of History
Ph.D., University of California. 1947.*

ROWE, ROBERT D. .......... Professor of Chemistry
Ph.D., Stanford University. 1946.*

RUJA, HARRY .......... Assistant Professor of Philosophy and Psychology
Ph.D., Princeton University; one year post doctoral study at University of California at Los Angeles. 1947.*

RUOCCO, ILSE H. (Mrs. L.) .......... Associate Professor of Art
M.A., Columbia University. 1934.*

RYAN, FREDERICK L. .......... Professor of Economics
Ph.D., University of California. 1946.*

SCHEVILL, KARL E. .......... Instructor in Spanish
Ph.D., University of California. 1949.*

SCHEY, OLE .......... Acting Assistant Professor of Mathematics
M.A., and two years of graduate study at the University of Minnesota and the University of California at Los Angeles. 1947.*

SCHRUPP, MANFRED H. .......... Assistant Professor of Education
M.Ed., and one and one-half years of graduate study at the University of Minnesota. 1948.*

SCHUNERT, JIM R. .......... Assistant Professor of Education
M.A., and one year of graduate study at the University of Minnesota. 1948.*

SCHUTTE, WILLIAM H. .......... Assistant Professor of Physical Education
M.S., University of Southern California. 1947.*

SCHWARTZ, EVA H. (Mrs. H.) .......... Acting Instructor in Chemistry
M.S., and one and one-half years graduate study at University of California. 1946.*

SCHWOB, MARION LYON (Mrs. W. E.) .......... Associate Professor of Physical Education
M.S., University of Southern California. 1934.*

SCOTT, FRANK L. .......... Assistant Professor of Physical Education
M.A., University of Michigan. 1947.*

SELLMAN, HUNTON D. .......... Professor of Speech Arts
M.S., University of Arizona. Three and one-half years graduate study at University of California, University of North Carolina and Yale University. 1946.*

SHANNON, FLORENCE S. (Mrs. E. L.) .......... Assistant Professor of Physical Education
M.S., University of Southern California. 1933.*

SHELAR, EUGENE .......... Assistant Professor of Biology
Ph.D., Cornell University. 1949.*

SHIELDS, ALLAN E. .......... Assistant Professor of Philosophy
M.A., and one year additional graduate study at University of Southern California. 1949.*

SHIELDS, KARENA P. .......... Acting Assistant Professor of English
A.B. and one year of graduate study at the University of Southern California. 1948.*

SHOUSE, CLAUDE F. .......... Assistant Professor of English
M.A., University of Kentucky; one and one-half years graduate study at University of Pittsburgh and University of Southern California. 1946.*

SHUTTS, WILLIAM H. .......... Assistant Professor of Engineering
M.S., University of Colorado. 1949.*

SILVERNAIL, CHESTER J. .......... Instructor in Astronomy
M.A., Claremont Graduate School. 1949.*

SJOSTRAND, THOR H. .......... Instructor in Engineering
M.S., Stanford University. 1947-48, 1949.*

SKILLING, W. T. (Retired 1936) .......... Professor of Astronomy

SMART, KEITH L. .......... Instructor in Biology
M.A., University of California. 1949.*

---

* Date of appointment.

SMITH, CHARLES ROBERTS..........Assistant Professor of Physical Education
M.S., University of Southern California. 1933.*

SMITH, CLIFFORD EDWARD..........Professor of Astronomy
Ph.D., University of California. 1937.*

SMITH, DEANE FRANKLIN..........Associate Professor of Music
M.Mus., Northwestern University. 1939.*

SMITH, LEILA DEBORAH (Retired 1948)..........Professor of Music
M.A., Columbia University. One-half year study at Stanford University and Northwestern University. 1922.*

SMITH, LOUIS E., JR...........Associate Professor of Physics
Ph.D., University of Washington. 1946.*

SORENSON, GEORGE N...........Associate Professor of Art
M.A., University of Southern California. 1946.*

SPANGLER, JOHN A...........Assistant Professor of Chemistry
Ph.D., West Virginia University. 1946.*

SPORTSMAN, CHARLES C...........Assistant Professor of Physical Education
M.S., University of Southern California. 1947.*

SPRINGSTON, CHRISTINE..........Associate Professor of Music
M.A., University of Washington. Diplomée d'execution, Conservatorie Americain, Fontainebleau, France. 1930.*

STEINMETZ, HARRY CHARLES..........Associate Professor of Psychology
Ph.D., Purdue University. 1930.*

STONE, HAMILTON L...........Assistant Professor of Engineering
B.S., U. S. Naval Academy. Two and one-half years of graduate study. Registered Mechanical Engineer. 1947.*

STONE, JOHN PAUL..........Head Librarian ; Professor of Library Science
Ph.D., University of Chicago. 1930.*

STORM, ALVENA (Mrs. Eugene)..........Associate Professor of Geography
A.M., University of California. 1926.*

STOUGH, MORROW F...........Assistant Professor of Education
Ph.D., University of California. 1950.*

STOVALL, HARRIET B. (Mrs. S. L.)..........Senior Librarian
Graduate, Berkshire Athenaeum, Massachusetts. 1925.*

STRAUB, LURA LYNN..........Assistant Professor of Commerce
M.C.S., Indiana University. 1948.*

STRAUSS, WILLIAM L...........Acting Assistant Professor of History
Ph.D., Harvard University. 1949.*

SUTTON, JOSEPHINE M...........Junior Librarian
A.B., University of Oklahoma. 1947.*

SWIGGETT, JEAN D...........Associate Professor of Art
M.F.A., University of Southern California. 1946.*

TALBOY, RUTH A...........Assistant Professor of Home Arts
M.A., Stanford University. 1947.*

TANNER, JESSIE R. (Retired 1936)..........Associate Professor of Physical Education and Director of Physical Education for Women
B.S. and Bachelor's Teaching Diploma. Teachers College, Columbia University. Graduate study at University of California and University of Southern California. 1904.*

TAYLOR, KENNETH M...........Assistant Professor of Biology
Ph.D., University of California at Los Angeles. 1949.*

TAYLOR, MERRELL A...........Assistant Professor of Biology
M.A., University of Michigan. 1946.*

TERHUNE, JOHN A...........Lecturer in Physics
M.S., Harvard University. 1946.*

---

* Date of appointment.

TERRY, WILLIAM L. .......... Lecturer in Physical Education
M.S., Indiana University; two years of additional study at University of Kentucky and University of Illinois. 1946.*

THEOBALD, JOHN R. .......... Professor of English
Ph.D., University of Iowa. 1946.*

TIDWELL, JAMES N. .......... Associate Professor of English
Ph.D., Ohio State University. 1947.*

TOLLEFSEN, DOROTHY J. .......... Assistant Professor of Physical Education
M.A., University of California. 1946.*

TORBERT, FRANCES B. (Mrs. H.) .......... Associate Professor of Commerce
M.A., University of Southern California. One year graduate work at Stanford University. 1937.*

TRAIL, MABEL COY .......... Associate Professor of English
Ph.D., University of Southern California. 1935.*

TUCKER, GORDON H. .......... Professor of Biology
Ph.D., University of North Carolina. 1945.*

VAN CLEAVE, MAURICE .......... Lecturer in Commerce
B.S., U. S. Naval Academy; one year graduate study at U. S. Naval War College. Public Accountant. 1948.*

VOEKS, VIRGINIA W. .......... Assistant Professor of Psychology
Ph.D., Yale University. 1949.*

WALBA, HAROLD .......... Instructor in Chemistry
Ph.D., University of California. 1949.*

WALKER, DONALD E. .......... Instructor in Sociology
M.Th., University of Southern California; one and one-half years graduate study at Stanford University. 1949.*

WALKER, HILDE KRAMER (Mrs.) .......... Assistant Professor of German
M.A., Northwestern University. 1931.*

WALLING, CURTIS R. .......... Associate Professor of Engineering
E.E., Stanford University; one and one-half years of graduate study at Stanford University and the University of Southern California. Registered Electrical Engineer. 1931.*

WATENPAUGH, FRANK M. .......... Associate Professor of Commerce
M.A., University of Southern California. Two years graduate study at University of Southern California and University of Oregon. Public Accountant. 1935.*

WATSON, DONALD R. .......... Dean of Arts and Sciences
Ed.D., University of Southern California. 1939.* Professor of Physical Science

WEBB, CHARLES R., JR. .......... Assistant Professor of History
Ph.D., Harvard University. 1949.*

WEST, EDNA A. .......... Assistant Professor of Commerce
M.A., Claremont Colleges. 1948.*

WHITE, ALFRED E. .......... Registrar; Director of Educational Research;
Ed.D., Stanford University. 1946.* Associate Professor of Guidance

WILKERSON, DYXIE C. (Mrs. D.) .......... Instructor in English
M.A., Oklahoma Agricultural and Mechanical College; one year of graduate study at the University of Southern California. 1946-48, 1949.*

WOLF, ERNEST M. .......... Instructor in Foreign Languages
Ph.D., University of Bonn. 1947.*

WRIGHT, WILLIAM H. .......... Professor of Commerce
Ph.D., University of Southern California. Public Accountant. 1921.*

ZIEGENFUSS, GEORGE .......... Assistant Professor of Physical Education
M.A., and one year of graduate study at Teachers College, Columbia. 1948.*

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* Date of appointment.

## ASSISTANT INSTRUCTORS

| | |
|---|---|
| BURKHARDT, FREDERIC S.<br>A.B., Dartmouth College. | Assistant in Education |
| BYRNE, CHARLES T.<br>A.B., San Diego State College. | Assistant in Journalism |
| CRAWFORD, RONALD M.<br>A.B., San Diego State College. | Assistant in Biology |
| GRASTY, GEORGE M.<br>A.B., University of Texas. | Assistant in Biology |
| HARVEY, HARRY T.<br>A.B., San Diego State College. | Assistant in Biology |
| HAYDEN, BERNARR F.<br>A.B., San Diego State College. | Assistant in Education |
| HEATHMAN, IVAN C.<br>A.B., San Diego State College. | Assistant in Education |
| KING, ROBERT E.<br>A.B., San Diego State College. | Assistant in Psychology |
| McCLINTON, JOSEPH R.<br>A.B., San Diego State College. | Assistant in Biology |
| NEAL, RICHARD W.<br>A.B., San Diego State College. | Assistant in Biology |
| RUTLEDGE, CLYDE K.<br>A.B., San Diego State College. | Assistant in Physics |
| UPDEGRAFF, WILLIAM D., JR.<br>A.B., San Diego State College. | Assistant in Biology |
| VULLIET, WILLIAM G.<br>B.S., San Diego State College. | Assistant in Physics |

## LECTURERS

| | |
|---|---|
| BLAKE, DEAN<br>Meteorologist, U. S. Weather Bureau. 1927.* | Lecturer in Meteorology |
| BURGERT, ROBERT H.<br>San Diego City Schools. 1948.* | Lecturer in Education |
| CONSIDINE, CHARLES R.<br>Industrial Engineer ; Public Accountant. 1946.* | Lecturer in Commerce |
| DE JULIEN, LORENZ F.<br>Self employed. 1949.* | Lecturer in Commerce |
| ENGLER, CARL H.<br>M.D., University of Southern California. 1949.* | Lecturer in Health |
| GELCHER, JOSEPH<br>Insurance underwriter. 1946.* | Lecturer in Commerce |
| GOODWIN, JOHN H.<br>Insurance broker. 1947.* | Lecturer in Commerce |
| GRECO, ANTHONY<br>Self employed. 1950.* | Lecturer in Physical Education |
| HARBERT, SELMA C.<br>M.A., Stanford University. 1950.* | Lecturer in Speech Arts |
| HUFF, GEORGE D., M.D.<br>Practicing physician. 1939.* | Lecturer in Health and Hygiene |
| HUNTINGTON, LUCILE H. (Mrs.)<br>Self employed. 1949.* | Lecturer in Commerce |

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* Date of appointment.

KARPINSKI, CHARLES E. ---------- Lecturer in Commerce
Attorney at Law. 1949.*

KOEPPE, CLARENCE E., DR. ---------- Lecturer in Geography
Ph.D., Clark University. 1948.*

KRUSE, PAUL J. ---------- Lecturer in Education
Ph.D., Columbia University.

LINDSLEY, BYRON F. ---------- Lecturer in Commerce
Attorney at law. 1947.*

McLEES, BERTRAM ---------- Lecturer in Commerce
Deputy District Attorney. 1946.*

PANOSH, ANNA M. (Mrs. L. C.) ---------- Lecturer in Spanish
A.B., University of Denver. One year graduate study at University of Mexico, Centro de Estudios Historicos and University of California. 1946.*

SAND, MARGARET C. ---------- Lecturer in Psychology
Ph.D., Columbia University. 1950.*

SARKISIAN, SARKIS S., M.D. ---------- Lecturer in Biology
Practicing physician. 1949.*

SLOBIN, HERMON L. ---------- Lecturer in Mathematics
Ph.D., Clark University. 1949.*

SNODGRASS, HERMAN G. ---------- Lecturer in Political Science
Civil Service Training Officer, U. S. Naval Air Station. 1948.*

STANIFORTH, ROBERT O. ---------- Lecturer in Commerce
Swing & Scharnikow, Attorneys. 1948.*

STEINBERG, WILLIAM ---------- Lecturer in Education
San Diego City Schools. 1949.*

SYLVESTER, HELEN K. ---------- Lecturer in Education
Principal, Euclid School. A.B., San Diego State College.

TROGE, RALPH F. ---------- Lecturer in Education
Principal, Woodrow Wilson Junior High School. Ed.D., University of Oregon.

VAN CLEAVE, MAURICE ---------- Lecturer in Commerce
B.S., U. S. Naval Academy. 1948.*

WILEY, JOAN G. (Mrs. J. N.) ---------- Lecturer in Psychology and Sociology
M.S.S., University of Buffalo. 1947.*

## MEDICAL STAFF

Carl H. Engler, M.D. ---------- Medical Examiner
O. S. Harbough, M.D. ---------- Medical Examiner
James R. Phalen, M.D. ---------- Medical Examiner
Frances E. White, M.D. ---------- Medical Examiner
Marilyn M. Fenwick, P.H.N. ---------- Nurse

## ADMINISTRATIVE OFFICE STAFF

Louise Anne Board ---------- Secretary, Instruction
Beatrice Bragstad, A.B. ---------- Secretary, Dean of Men
Constance Branham ---------- Secretary, Physical Education Division
Anne T. Brown ---------- Admissions Secretary
Natalie R. Camerlynck ---------- Junior Typist-Clerk, Education Office
Detty June Conyers, A.B. ---------- Assistant Secretary, Office of the President
Evadne Deardorf ---------- Assistant Registrar
Gertrude K. Dickinson ---------- Bookkeeper, Grade II, Business Office
Carey D. Folger ---------- Senior Account Clerk, Business Office
Berkeley Freeman ---------- Assistant Secretary, Personnel Services
Dolores Grote ---------- Secretary, Social Sciences Division
Genevieve M. Hamblen ---------- Secretary, Personnel Services
Mary Elizabeth Harrison ---------- Book Repair Clerk, Library

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* Date of appointment.

| | |
|---|---|
| Frances F. Hemenway | Intermediate Stenographer-Clerk, Library |
| Georgia Hochstetler | Secretary, Campus Laboratory School |
| Phyllis Jean Hord | Junior Typist-Clerk, Library |
| Persis T. Hurlbut | Secretary, Audio-Visual Services |
| Irene Janeck, A.B. | Secretary, Physical Science Division |
| Mary L. Kaser, A.B. | Secretary, Secondary Education Office |
| Constance King, B.S. | Secretary, Dean of Women |
| Fay Landweer, A.B. | Secretary, Summer Sessions Office |
| Mildred H. LeCompte | Secretary to the Librarian |
| Ruth E. Little, A.B. | Mimeograph Office |
| Dorothy Livengood | Secretary, Life Sciences Division |
| Jacqueline Mackie | Intermediate Stenographer-Clerk, Business Office |
| Joan Marie Mariner | Junior Typist-Clerk, Library |
| Jean F. McGhee, B.S. | Secretary, Evaluations for Teaching Credentials |
| Mirian E. Moore, A.B. | Secretary, Dean of Arts and Sciences |
| Hester Newman | Assistant Secretary, Placement Office |
| Donald G. Parker | Accounting Office, Grade II, Business Office |
| Marion L. Parker, M.A. | Statistician |
| Helen M. Perry | Registrar's Office |
| Edith E. Peterson | Junior Typist-Clerk, Library |
| Katherine Pyle, A.B. | Secretary, Veterans Office |
| Marjorie Rand | Intermediate Stenographer-Clerk, Business Office |
| Charlene M. Robbins, A.B. | Registrar's Office |
| Doris K. Roger, A.B. | Intermediate Stenographer-Clerk, Business Office |
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1951/52

# SAN DIEGO STATE COLLEGE

## BULLETIN

## AND

## ANNOUNCEMENT OF COURSES

THE GREAT SEAL OF THE STATE OF CALIFORNIA
EUREKA

FOR THE YEAR 1951-1952

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# ERRATA

PAGE 66 THE FOLLOWING COURSE WAS OMITTED:
AESTHETICS 52A-52B. SURVEY OF ORIENTAL ART (3) YEAR, I.
A STUDY OF THE ART OF THE GREAT CULTURES OF THE ORIENT. (52A IS A PREREQUISITE FOR 52B).

PAGE 76 BIOLOGY (G) 4 PLANT AND ANIMAL TYPES (3),I,II
DELETE "PREREQUISITE" AND REST OF LINE.
ADD: NOT OPEN TO STUDENTS WITH CREDIT FOR BIOLOGY 10B, BOTANY I OR 2A-2B, OR ZOOLOGY 1A-1B.

PAGE 85 (SEE "THIRD YEAR" UNDER PLAN FOR B.S.DEGREE)
GERMAN S3-S4 SHOULD READ GERMAN 8A-8B.

PAGE 86 (SEE "THIRD YEAR" UNDER PLAN FOR A.B.DEGREE AND CERTIFICATE)
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## Announcement of Courses

VOLUME 38

JUNE, 1951

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UNIVERSITY OF ILLINOIS

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# 1951

## JULY

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## AUGUST

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## SEPTEMBER

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## OCTOBER

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## NOVEMBER

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## DECEMBER

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# 1952

## JANUARY

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## FEBRUARY

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## MARCH

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## APRIL

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## JUNE

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## JULY

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## AUGUST

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## SEPTEMBER

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## OCTOBER

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## NOVEMBER

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## DECEMBER

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# CALENDAR 1951-1952

## SUMMER SESSIONS, 1951

Term A (6 weeks) June 18–July 27
Term B (9 weeks) June 18–August 17
Term C (3 weeks) July 30–August 17

## FALL SEMESTER, 1951-1952

| | |
|---|---|
| July 14 | Qualifying examinations for all entering students. (8.15 a.m. to 12.30 p.m.) |
| August 1 | Applications for admission must be filed on or before this date. |
| August 20 | Qualifying examinations for all entering students. (8.15 a.m. to 12.30 p.m.) |
| September 4-7 | Orientation program. Attendance required of all new students. |
| September 5 | Fundamentals test and General Culture test for Teacher Education. (Fundamentals test, 8.30 a.m. to 12 m.) (General Culture test, 1 p.m. to 4.30 p.m.) |
| September 10 | Admission Day holiday. |
| September 11-12 | Registration and payment of fees. |
| September 13 | Instruction begins. Late registration fee becomes effective. |
| September 18 | Applications for admission to Teacher Education. Little Theater, 11 a.m. |
| September 24 | Last date for late registration. |
| September 24-25 | File registration books. |
| November 2 | Last date for withdrawal from classes. |
| November 12 | Armistice Day holiday. |
| November 22-24 | Thanksgiving recess. |
| December 7 | Last date for filing applications for mid-year graduation. |
| December 15 | Last day before Christmas recess begins. |
| January 2 | Classwork resumes. |
| January 17-24 | Semester examinations. |
| January 24 | First semester ends. |

## SPRING SEMESTER, 1951-1952

| | |
|---|---|
| anuary 2 | Applications for admission must be filed on or before this date. |
| anuary 12 | Qualifying examinations for all entering students. |
| anuary 28 | Fundamentals test and General Culture test for Teacher Education. (Fundamentals test, 8.30 a.m. to 12 m.) (General Culture test, 1 p.m. to 4.30 p.m.) |
| anuary 29-30 | Orientation program. Attendance required of all new students. |
| anuary 31-February 1 | Registration and payment of fees. |
| February 4 | Instruction begins. Late registration fee becomes effective. |
| February 5 | Applications for admission to Teacher Education. Little Theater, 11 a.m. |

| | |
|---|---|
| February 11 | Last date for late registration. |
| February 12 | Lincoln's Birthday holiday. |
| February 13-14 | File registration books. |
| February 22 | Washington's Birthday holiday. |
| March 28 | Last date for withdrawal from classes. |
| April 7-12 | Spring recess. |
| May 28-June 5 | Semester examinations. |
| May 30 | Memorial Day holiday. |
| June 5 | Second semester ends. |
| June 6 | Commencement. |

## SUMMER SESSION, 1952

Dates to be announced.

# FEES AND EXPENSES

## PROBABLE EXPENSES FOR ONE SEMESTER

An estimate of the expense of attendance for one semester is given below. No estimate is made as to the cost of clothing, or other personal items, since these figures vary with the demands of the individual.

### A Partial Estimate of Expenses
One Semester

| | *Minimum* | *Maximum* |
|---|---|---|
| Fees | $24.00 | $31.50 |
| Books | 18.00 | 30.00 |
| Board and room | 275.00 | ---- |
| Transportation, lunches, incidentals | 20.00 | 60.00 |
| Miscellaneous | 5.00 | |

Before enrolling in college, the student should possess sufficient resources to meet the minimum expenses for one semester. A limited amount of clerical work in offices and in the library may be offered from time to time but ordinarily it is not sufficiently remunerative to reduce expenses materially.

### Enrollment Fees Payable at Time of Registration

| | |
|---|---|
| Regular students (carrying more than 6 units): | |
| Auditors pay same fees as students carrying courses for credit. | |
| Tuition | $6.50 |
| Materials and service | 7.50 |
| Total | $14.00 |
| Limited students (carrying 6 units or less): | |
| Auditors pay same fees as students carrying courses for credit. | |
| Tuition (one, two, or three units) | $5.25 |
| Materials and service | 2.25 |
| Total | $7.50 |
| Tuition (four, five, or six units) | $6.50 |
| Materials and service | 7.50 |
| Total | $14.00 |
| Student activity fee (not a state fee): | |
| Regular students | $10.00 |
| Limited students | 2.00 |
| Associated Students Group Accident Insurance | |
| Men | 3.50 |
| Women | 2.50 |

### Miscellaneous Fees
(Fees payable when service is rendered)

| | |
|---|---|
| Change of program | $1.00 |
| Failure to meet administratively required appointment or time limit | 2.00 |
| Evaluation of records for nonmatriculated students | 2.00 |
| Late registration | 2.00 |
| Transcript of record (first copy free) | 1.00 |
| R. O. T. C. deposit (unexpended portion is refundable) | 10.00 |

### Graduation Fees

| | |
|---|---|
| State teaching credentials (each credential) | $4.00 |
| Diploma | 1.00 |

The credential fee is collected through the college by cashier's check or post office money order made payable to the State Department of Education.

### Summer Session Fees

| | | |
|---|---|---|
| Tuition, each session | (Per unit) | $7.50 |
| Activity fee (not a state fee) | | 2.00 |

# THE COLLEGE

## FUNCTIONS OF THE STATE COLLEGES

The state colleges have three major functions, namely: (1) To help the individual student to develop a well-rounded and adjusted personality; (2) to promote in all students civic intelligence and competence; and (3) to create supplies of trained men and women to serve as teachers and officials in the elementary and secondary schools, to fill places of leadership in business and industry, and to transfer to graduate institutions to equip themselves to extend the frontiers of knowledge and to occupy the positions of leadership in various professions. In terms of publicly supported higher education, the state colleges and the university together make provision for the realization of all the essential objectives of higher education in our State.

To achieve their unique purposes the state colleges have developed and are improving offerings as follows:

1. Teacher education curricula for those students who plan to teach, supervise, or administer in the elementary school, the junior high school, and in secondary schools.
2. Preprofessional curricula.
3. Four-year curricula in such fields as business, industry, governmental services, homemaking, and social service.
4. General education for students who take work which leads toward the bachelor's degree or to the higher professions through graduate work.
5. Guidance services to assist the individual student to plan his educational program and to make his college and life adjustments.
6. Extension courses in appropriate fields.

The democratic controls exercised over the state colleges make them readily and effectively responsive to individual and community needs and encourage them continuously to make significant improvements in both curriculum and personal services. The state colleges are thus laboratories in which the facts and theories developed in research, in community living, and in daily association with students are reflected in an instructional program designed to provide educational services inherent in the principle of equality of opportunity.

## LOCATION AND ENVIRONMENT

Renowned as a winter resort with a mild but invigorating climate, San Diego has become equally famous for its cool summers. High cultural standards in art, music, literature, and science create a stimulating environment for a college. Many of these advantages are to be found in the heritage resulting from the expositions of 1915-16 and 1935-36, including the buildings themselves, which portray the best types of Spanish colonial art and architecture. Housed in these buildings are the Fine Arts Gallery, exhibits in anthropology, natural history, and American archaeology, which are in many respects unsurpassed. The outdoor organ, the Ford Bowl, and the horticultural gardens make Balboa Park, in which all these facilities are located, world renowned. The Scripps Institution of Oceanography, operated by the University of California at La Jolla, gives opportunity for important cooperation in the biological sciences.

## BUILDINGS AND EQUIPMENT

On February 1, 1931, the college was moved to the new campus, located one mile north of the city's principal east-west boulevard, El Cajon Boulevard. The buildings are of Spanish-Moorish architecture which is well suited to the landscape and climate of this region. They include the Academic Building (which houses lecture halls, classrooms and administrative offices); the Science Building; the Fine Arts Building; the Library; the Little Theater; the Music Building; the Campus Elementary School; Scripps Cottage (a social clubhouse for women students); the Cafe and Book Store; and the Physical Education Building (a structure with adequate facilities for both men and women). The gymnasium contains a very fine basketball floor with stands that will accommodate 1,500 spectators. A fine concrete stadium, constructed in a natural site, has a seating capacity that is adequate for present needs. The open air theater, seating 4,200 persons, serves as a meeting place for large groups.

## FACILITIES FOR THE EDUCATION OF TEACHERS

The college maintains a modern elementary school on the campus where it has developed an extensive program for the education of elementary school teachers. The classroom-laboratory plan which calls for the use of work-rooms, the library, and shops affords unusual opportunities for the induction of students into teaching. By arrangement with the San Diego city and county schools, directed teaching is provided in the elementary and secondary schools.

## THE FACULTY

The faculty of 254 members has received advanced training in some 124 colleges and universities of the United States or foreign countries. The professional education of the faculty places the college at the 97 percentile position among teacher education institutions in the Nation. For listings and further details, see the Directory.

## THE LIBRARY

The library facilities of this college are noteworthy for an institution of its size. The library consists of well over 120,000 books and receives more than 900 different periodicals selected to meet the requirements of a modern educational institution. Professionally trained librarians are available to render assistance to students and faculty in their reading and reference work.

The Campus Elementary School Library, representing a collection of 15,000 volumes, possesses equipment and building facilities that are unique.

## ACCREDITATION

San Diego State College is a member of the Northwest Association of Secondary and Higher Schools, the American Association of Colleges for Teacher Education, and the Western College Association.

## LIVING ACCOMMODATIONS

Living arrangements for students whose homes are not in San Diego or within commuting distance are made through the offices of the Dean of Women or the Dean of Men. Women students are urged to live in the residence hall adjoining the campus. Careful consideration is given to study conditions, healthful living, and adequate social opportunities. Room and board may be secured for approximately $275 per semester, payable in four installments. Opportunities to reduce this figure by working a few hours each week are occasionally available. Reservations should be made in advance through the Manager of Quetzal Hall, 5192 College Avenue, San Diego 15, California. Single women students under the age of 21 who find other accommodations more desirable must file with the Dean of Women a statement from the parent or guardian.

## VETERANS' EDUCATION AND HOUSING

The college has been approved by various accrediting agencies to offer courses for veterans leading to the baccalaureate in some 23 major fields and to the master's degree and various teaching credentials. In connection with the Personnel Services Center, a veterans' office is maintained on the campus to facilitate registration, aid in the establishment of benefits, afford special counseling services, and serve as an information center.

Through the City of San Diego, 400 family units formerly under the jurisdiction of the Federal Public Housing Authority have been made available to the college for the housing of its married veterans. These units are located some eight miles from the campus proper at Aztec Terrace, midway between Old Town and Loma Portal. Applications for housing at Aztec Terrace are made through the office of the Dean of Men.

## STUDENT LIFE

A rich field of extracurricular activities is available to the student throughout his college life. The student is urged to select these activities carefully in order that he may profit by such extra-class experiences without lowering his standards of scholarship. The *Student Handbook*, available at the time of registration, gives information concerning activities which include organizations in every department of the college, and opportunities for individual and group experience in the social, athletic, fraternal, religious and governmental life of the campus.

## STUDENT HEALTH SERVICE

The Health Department is maintained for the protection and care of student health. A complete physical examination is required of each student upon admission to college. Careful attention is given to cases undergoing remedial treatment or to cases in which a modification of study load or amount of participation in physical activities seem advisable.

A college physician and school nurse are available for consultation and emergency treatment. Students who have been absent over three days because of illness should receive clearance from the Health Office before returning to classes.

A group plan for accident insurance is in operation for students who desire to participate.

## PERSONNEL SERVICES CENTER

The college offers the services of a trained staff to students who wish help in the solution of problems which are personal, social, academic, or occupational in nature. It is a program designed to help students gain the greatest possible advantage of their college experience. Agencies and facilities cooperating in the effort to assist students include the student health service, reading and study laboratory, the speech improvement program, mathematics clinic, the placement and occupational guidance service, and a staff of personal counselors. Students who wish to take advantage of these facilities may do so through the Personnel Services Center.

## PLACEMENT OFFICE

The Placement Office provides a central source of information on placement opportunities and vocational trends. The staff assists undergraduates in finding part time employment. Full time employment for graduates or former students is facilitated through contacts with schools, businesses, and industries in this locality.

## SCHOLARSHIPS

A number of scholarships for both men and women has been made available through the efforts of the alumni, civic organizations, student organizations, business and professional groups and individuals, and other friends of the college. Superiority in ability and achievement, strength of character, and worthiness from the point of view of need are the standards upon which selection is based. Scholarship aid is limited for the most part to students who have completed at least one semester at the San Diego State College. Except for athletics grants-in-aid, which are initiated through the Director of Athletics, scholarship applications are made through the office of the Dean of Women.

Unless otherwise stipulated, all scholarship awards are determined and announced by the faculty Committee on Loans and Scholarships in October of the college year. Applications for scholarships for the fall semester must be filed with the office of the Dean of Women prior to October 15th. The scholarships available for 1951-52:

**ALPHA GAMMA DELTA.** This sorority presents a $50 award each year to the student in the sorority with the highest grade point average.

**ALTRUSA CLUB.** Two scholarships of $50 each are made available annually by the Altrusa Club of San Diego. Applications are considered from women students enrolled in San Diego State College who are worthy and in need.

**AMERICAN ASSOCIATION OF UNIVERSITY WOMEN.** One scholarship of $100 is given each year in June to a graduating senior who will begin work in an accredited college or university toward a higher degree or credential. The scholarship is made available by the San Diego Branch of the American Association of University Women. Interviews with representatives of that organization are required.

**AMERICAN SOCIETY OF CIVIL ENGINEERS, SAN DIEGO SECTION.** A scholarship of $75 is awarded annually through the San Diego Section of the American Society of Civil Engineers to the engineering student selected for the scholarship on a basis of character, ability, personal qualities, and financial need. Nominations are made by the Engineering Department of the College. At least sophomore status is required for nomination.

**ANONYMOUS (B).** A scholarship of $100 is given each year to be divided among students in financial need, at the discretion of the Committee on Loans and Scholarships. The committee gives consideration to scholastic attainment, financial need, and character.

**ANONYMOUS (E).** A $50 scholarship, awarded each semester through the Committee on Loans and Scholarships, is made available by a public spirited citizen who prefers to assist a student majoring in science.

**ASSOCIATED ARTS OF SAN DIEGO.** A $150 scholarship for a period of two years to a student outstanding in the Speech Arts Department.

**ASSOCIATION OF CHILD EDUCATION.** The Association of Child Education makes available each year a $50 scholarship to a student in the Kindergarten-Primary program. The award is customarily made to an upper division student showing promise in a particular field who is in need financially.

**BARNES CHASE COMPANY BASEBALL SCHOLARSHIP.** Donated by Mr. and Mrs. Norman R. Barnes. Twenty-five dollars a month for 10 months, from September through June. Applicant must be officially enrolled in the college as a regular student in good standing; must maintain a satisfactory scholastic record and be progressing toward an academic objective; must be a member of the freshman or varsity baseball team; and be of sound moral character. The selection of the recipient will be recommended by the baseball coach and approved by the athletic department with the final approval of the Committee on Loans and Scholarships.

**BARNES CHASE COMPANY BASKETBALL SCHOLARSHIP.** (Same as above except for basketball player.)

**BLUE KEY.** One scholarship of $50 is awarded annually to an entering freshman male student who has an outstanding record of achievement in high school activities, provided he fulfills all requirements each year. A like amount will be given each year for a period of four years.

**CABRILLO CIVIC CLUBS.** A scholarship of $250 a year will be awarded a student of Portuguese descent and may be made available in his senior year of high school. The recipient must have good scholastic standing and be in need of financial assistance. An autobiography must accompany the application.

**CAP AND GOWN.** One $50 scholarship is awarded annually to an upper division woman student who has attended San Diego State College for at least one semester and who has maintained at least a "B" average in scholarship for her entire college career. Applications may be secured from the Office of the Dean of Women or the San Diego State College chapter of Cap and Gown.

**CHAMBER OF COMMERCE MUSIC SCHOLARSHIPS.** Several scholarships of $30 per semester have been made available by the San Diego Chamber of Commerce to players of the following instruments in the college band: Solo cornet, solo clarinet, first French horn, first trombone, first baritone, first Sousaphone, and first drum. Applications are filed directly with the Music Department.

**CHIANELLI, FRANK.** A $50 scholarship is donated by Sons of Columbus in memory of the founder of this organization in California. The student must be of Italian descent, of good moral character, in need of financial assistance, and have a high scholastic rating.

**CHI OMEGA FRATERNITY** awards annually a $20.00 scholarship to a student outstanding in Sociology Department.

**DAUGHTERS OF THE AMERICAN REVOLUTION.** Two scholarships of $25 each are presented each spring, one to a young man and the other to a young woman outstanding in citizenship and Americanism. Applicants should have at least a "B" average in scholarship, should be able to demonstrate need for financial assistance, and should have junior standing in the college when selected. The selection is made by the faculty Committee on Loans and Scholarships and presentation of awards is made at a luncheon on Flag Day, which is given by the Daughters of the American Revolution.

**DEBATE SCHOLARSHIP.** $50 will be awarded a winner in the debate events at the June National Forensic League competition. This award will be given to a student who enrolls at San Diego State College with a major in speech. The award is made possible by the generosity of Admiral Elliott Senn who has donoted $1,500 to the San Diego State College Foundation to be used for Speech Department scholarships.

**DEBATE SCHOLARSHIP.** $50 will be given to a student enrolled at San Diego State College who is outstanding in debate. Selection will be made by the Speech Arts Department with final approval by the Committee on Loans and Scholarships.

**DELTA DELTA DELTA NATIONAL FRATERNITY ALLIANCE.** $100 a year will be given for five years in memory of Georgia Aiman Shattuck. This scholarship is to be awarded to a woman student, in the upper division, who has been admitted to the teacher education curriculum, with a "B" average in all college work, and who is in financial need. Applications should be secured from the Office of the Dean of Women.

**FACULTY DAMES.** Two scholarships of $50 each are given annually to deserving women students selected by the Loans and Scholarships Committee.

**FLEMING, HARVEY, GOLF.** Through a trust fund set aside for awards to exceptional golf players who enroll in college, scholarships of $250 are given. This is a competitive award.

**FOOTHILL BUSINESS AND PROFESSIONAL CLUB.** Two $50 scholarships will be awarded to young women students entering San Diego State College from Grossmont High School.

**FOOTLIGHTS THEATRE, INC.** Annual awards of $50 each are made to members of this Little Theatre group who do outstanding work in dramatic arts.

**FRESHMAN CLASS, 1950-1951.** Two scholarships of $50 each will be awarded in the fall of 1951, one to an entering freshman man and one to an entering freshman woman. The scholarships will be awarded to students who have demonstrated leadership in high school activities. Final selection will be made by the Committee on Loans and Scholarships.

**HALE, E. T., ATHLETIC SCHOLARSHIPS.** $25 a month or more is donated for use of the Athletic Department in scholarships to outstanding athletes.

**JONES, SYBIL ELIZA MEMORIAL.** A scholarship of $100 is awarded annually to a student in drama. Applicant must be officially enrolled in at least his fourth semester in speech and drama with participation in dramatic productions on the campus. He must have at least a "C" average in all college work. Applications are made to the Speech Arts Department for action and awards are made after approval of the faculty Committee on Loans and Scholarships.

**KAPPA BETA NU.** A $100 scholarship is offered annually to a junior or senior woman student in elementary teacher education. Applicant must be a resident of San Diego County who is in financial need. Final selection rests with a scholarship committee of Kappa Beta Nu.

**KAPPA DELTA PI.** Two $25 scholarships are awarded annually by Kappa Delta Pi of San Diego State College. Selection for awards is made by the group.

**KAY JEWELERS SCHOLARSHIP.** $30 a semester for eight semesters is awarded an entering freshman. This scholarship is to be given alternating years to men and women students. In the fall semester, 1951, the scholarship will be awarded to a young woman. Selection is made by the Committee on Loans and Scholarships from applications received from high school students.

**LA MESA EVENING WOMEN'S CLUB.** A $75 scholarship is awarded a senior in high school who is entering San Diego State College. Selection is made by the club.

**LINKLETTER, ART.** Each June four $50 awards will be made to students graduating from San Diego City and County high schools: (1) one to a girl and one to a boy graduating from high schools with enrollment of 1,000 or over; and (2) one to a boy and one to a girl from high schools with enrollment under 1,000. Applications must be sent to the Committee on Loans and Scholarships of the College. Selection is based on scholarship, citizenship, and need.

**MARCY, MAY FINNEY.** Fifty-dollar scholarships are awarded from this fund to women students in upper division. Applications are made to the Dean of Women and awards made upon recommendation of the faculty Committee on Loans and Scholarships to Mrs. Marcy and a committee of members of Cap and Gown on San Diego State College campus.

**NOMA SCHOLARSHIP.** Presented by the National Office Management Association. $100 a year is provided to a student planning to major in Office Management. The scholarship will be restricted to students desiring to major in Office Management beginning with their junior year. Applications may be secured from the Office of the Dean of Women or the Chairman of the Department of Business Education, Secretarial and Office Management, not later than May 15th each year. The student chosen will be notified by June 10th.

**NORTH PARK KIWANI-ANNES.** One scholarship of $50 a semester for a year is awarded annually by this group to a male student preparing for teaching. The recipient must have at least junior standing at the time and be approved by the Committee on Loans and Scholarships.

**OSTEOPATHY AUXILIARY** of San Diego County awards annually $100 to a student who has graduated from San Diego State College and has been accepted for enrollment in the College of Osteopathy in Los Angeles.

**PANHELLENIC OF SAN DIEGO STATE COLLEGE.** $50 is given annually to the sorority member who has made the highest grade point average in the fall semester.

**P. E. O. SCHOLARSHIPS.** Various chapters of this organization assist worthy students in amounts ranging from $15 a month to $50 a semester. Usually the selection for the awards is made by the chapter itself.

**PI LAMBDA THETA.** An annual scholarship of $50 will be given to a senior student in education. The selection will be made by the fraternity with approval of the Committee on Loans and Scholarships.

**SAN DIEGO BUSINESS AND PROFESSIONAL WOMEN'S CLUB.** A $50 scholarship is awarded annually to a worthy young woman attending San Diego State College and majoring in Business Administration and having at least a "C" average.

**SAN DIEGO CITY PANHELLENIC.** Two $50 scholarships are awarded annually to two upper division women students. Applications are made through the faculty Committee on Loans and Scholarships and selection is left to the discretion of the committee.

**SAN DIEGO CITY TEACHERS ASSOCIATION.** Two scholarship of $50 each are presented each year to prospective teachers with no restrictions as to college year. Applications are made on forms supplied by the San Diego City Teachers Association and are reviewed by the association's committee on scholarships. Personal interviews are required, and final selection is made by that committee.

**SAN DIEGO COUNTY TEACHERS ASSOCIATION.** From two to four $100 scholarships are made available annually by this group of teachers. Awards are made to students in the field of elementary education and final selection rests with the Committee on Loans and Scholarships.

**SAN DIEGO COUNTY FEDERATION OF WOMEN'S CLUBS.** A $50 award is made to a student majoring in Art. Student is chosen by the Art Department and must submit some art object he has made.

**SENN, PERCIE BELLE, SCHOLARSHIP IN SPEECH.** A scholarship of $50 a semester for four semesters is given by Admiral Elliott Senn and the San Diego County Committee of the National Society of the Colonial Dames of America in memory of Admiral Senn's mother. The scholarship is open to Seniors in San Diego city and county high schools on a competitive basis in a speech contest. Subject, time and place of the contest will be announced each spring by the Speech Department.

**SOUTHLAND CLUB SCHOLARSHIP.** $50 award made available by the Southland Club for Business and Professional Women to a junior or senior woman student who plans to enter business or a profession. The student must have at least a "B" average; she must have been graduated from a San Diego City or County high school and must be of good moral character and in financial need. Applications made at the Office of the Dean of Women and approved by the Committee on Loans and Scholarships.

**STEINMAN-HILLEL.** Mr. and Mrs. Lou Steinman, members of the San Diego Lasker Lodge of the B'nai B'rith, which sponsors the Hillel organization on the San Diego State College campus, have set aside $400 for scholarships, $50 to be awarded annually for the next 8 years to a student who has done the most to further the cause of interfaith cooperation among the students of the campus. The selection of the awardee shall be made by a committee of three judges.

**STOTT, MRS. DOROTHY CRANSTON.** Each June a scholarship of $100 will be awarded to a student who has attended the San Diego State College for at least two years and who is being graduated or has been graduated by the San Diego State College with a major in English who begins or continues work in the San Diego State College, or in any other accredited college or university, towards a higher degree or credential. The selection is made by the Department of English with approval by the Committee on Loans and Scholarships.

**STOTT, K. W.** Each June a scholarship of $100 will be awarded to a student who has attended the San Diego State College for at least two years and who is being graduated or has been graduated by the San Diego State College with a major in History who begins or continues work in the San Diego State College, or in any other accredited college or university, towards a higher degree or credential. The selection is made by the Department of History with approval by the Committee on Loans and Scholarships.

**TEACHER EDUCATION SCHOLARSHIP.** The California Congress of Parents and Teachers, Inc., each year gives $300 to be awarded to one or two students. Selections are made upon the following conditions: (1) The recipient must have high qualifications and be in financial need; (2) The scholarship will be granted to students training to teach in the public elementary schools of California; and (3) The award shall be limited to students in the junior and senior years and graduate level.

**UNESCO SCHOLARSHIP.** A $50 scholarship is awarded at the time of the annual High School UNESCO Conference. The recipient is selected from three high school students attending the conference who make the best showing.

**VISTA BUSINESS AND PROFESSIONAL WOMEN'S CLUB.** $100 scholarship made available to one or more International students to assist them with tuition fees.

**WALKER, RALF MARC.** A scholarship in the amount of $500 is made available by the Walker-Scott Corporation in memory of the late Mr. Ralf Marc Walker to a woman student majoring in merchandising or retail trade at the San Diego State College. The scholarship is presented to a girl in Walker's Hi-Debber Council each year. The total scholarship is deposited in the San Diego State College Foundation and is handed to the recipient at the rate of $50 a semester for each of the first three years and $100 a semester for the two senior semesters.

**WEINBERGER, HENRY, INTERFAITH SCHOLARSHIP.** A scholarship of $100 is awarded in April of each year to the student of any religious faith enrolled at the San Diego State College who is judged to have done the most to further interfaith ideals among the students of the college during the year of the award. This scholarship is made available by Mr. Henry Weinberger of the Lasher Lodge of B'nai B'rith, under auspices of the B'nai B'rith-Hillel Councilorship on San Diego State College Campus.

**WOMEN'S AUXILIARY OF SAN DIEGO DENTAL SOCIETY.** An annual award of $100 is made available by the Women's Auxiliary of San Diego Dental Society to an outstanding male student in pre-dentistry.

## LOANS

Short term loans are available to students who have attended the San Diego State College for at least one semester and who have demonstrated ability to do satisfactory college work. Applications for loans are made to the Committee on Loans and Scholarships through the Office of the Dean of Men or Dean of Women.

# ADMISSION AND REGISTRATION

## GENERAL ADMISSION REQUIREMENTS

High school graduates and other applicants possessing equivalent preparation may be admitted to this college upon evidence of fitness to profit by college instruction, such fitness to be shown by previous scholastic records, by evidence of good moral character and personal qualifications, and by satisfactory scores on tests which the college may require.

## ADMISSION OF HIGH SCHOOL GRADUATES

(1) A high school transcript must be presented showing satisfactory scholarship, and (2) applicants must demonstrate readiness for college instruction by making satisfactory scores on such tests as the college may designate.

**Regular status** will be granted if the student has earned A or B grades in not less than 16 semester courses during the tenth, eleventh, and twelfth grades.

**Provisional status** will be granted if the student has earned A or B grades in not less than 12 semester courses during the tenth, eleventh, and twelfth grades. Individuals who fall slightly below the above standard may be admitted to provisional status if qualifying examination scores indicate probable success in college. One year is allowed for transfer to regular status which may be attained upon completion of 24 or more units of college work with grade average of C or better. Full credit is allowed for all regular college work completed.

## ADMISSION BY EXAMINATION

Certificates of successful examination before the College Entrance Examination Board will be accepted when candidates cannot meet the above scholarship requirements.

## ADMISSION OF ADULTS TO SPECIAL STATUS

**Adult special status** may be granted, in exceptional cases, to persons over 21 years of age who do not fully meet the college entrance requirements provided that ability to do college work is satisfactorily demonstrated through qualifying examinations administered by the college. Such students may be transferred to regular status upon completion of 24 or more units of college work taken in residence with grade average of C or better. Full credit is allowed for all regular college work completed.

**Special students** are those students carrying courses in the Extended Day Program only or other students who may be granted permission to take limited work. Special students are not eligible as candidates for a degree until all entrance requirements have been met; however, courses satisfactorily completed carry full college credit.

**Special graduate students** are graduates who have not qualified for admission to graduate status. (See *Admission to Graduate Study.*)

## ADMISSION WITH ADVANCED STANDING

Credit earned in recognized institutions of collegiate grade will be evaluated and advanced standing allowed accordingly toward the graduation requirements of this institution. Applicants must show an average grade of C or better for all college work, for the last college attended, and for the last semester of attendance in order to qualify for regular status. A student who enters with advanced standing is one who has completed at least 12 units of passing work in another collegiate institution. However, no applicant may disregard his collegiate record and apply for admission only on the basis of his high school work. No credit earned after a student has accumulated 64 units of work in all types of collegiate institutions may be transferred from a junior college.

An applicant from an unaccredited college may be admitted by action of the Board of Admissions if his college record and qualifying examinations meet the admission requirements. Credits earned in unaccredited colleges or universities may be accepted provisionally, but will not be counted toward graduation requirements until the student has earned 24 semester units in residence with at least a C average.

Students seeking admission with advanced standing must furnish complete transcripts for all work attempted beyond the eighth grade. If an official evaluation is desired, a deposit of $2 must accompany the application and be received together with all transcripts at least 30 days before the date of registration. At least 45 semester units must be completed before a student may apply for an evaluation.

## ADMISSION TO GRADUATE STUDY

**Graduate status** may be granted to applicants who have regularly applied and have filed official transcripts as evidence of their possession of a bachelor's degree from an accredited institution. Refer to Master of Arts Degree and to Teaching Credentials.

**Graduate special status** is granted to those who are provisionally admitted to graduate study. It is given to a student (1) who has not completed all admission procedures required for graduate status and (2) to a student whose bachelor's degree was earned at an unaccredited college. A student from an unaccredited college will be eligible for graduate status when he has earned a grade point average of 1.5 on 12 or more units of approved upper division work at this college and has cleared all undergraduate deficiencies.

**Admission to candidacy** for the master's degree or for a teaching credential may be achieved by meeting the respective specific requirements.

**Admission to "200" numbered courses** requires graduate status and the meeting of specific prerequisites. A graduate student who may be permitted to enter a "200" numbered course pending full graduate status will be given only upper division credit if graduate status is not achieved by the end of the term in which the course is given.

## DEGREES OFFERED

The following degrees are offered by the college: bachelor of arts, bachelor of science, bachelor of education, and master of arts.

## EXTENDED DAY PROGRAM

In order to meet the needs of adults in the community for work on the college level, courses are offered in the late afternoon and evening under an extended day program. These include both undergraduate and graduate courses and carry full college credit. Classes offered under this program consist of those courses normally scheduled as part of the regular college offerings and are taught by faculty of the college, but moved to a late afternoon or evening hour to permit in-service teachers, public personnel, businessmen, and others to attend. These courses cover a wide range of academic and educational subjects including education, business administration, public administration, engineering, and the sciences. A special bulletin describing the current offerings is issued each semester and may be obtained upon request from the Office of the Dean of Educational Services.

## EXTENSION PROGRAM

In order to serve more adequately the needs of the community, the college cooperates with off-campus organizations and groups in arranging extension classes in response to expressed needs when the group is sufficiently large to finance the instruction. Offerings are made each semester in a number of departments including education, business administration, and the arts and sciences. Classes may be organized at various points within San Diego and Imperial Counties. A minimum of 15 to 20 students is usually required in order to establish a class. The usual class carries two units of credit and meets once a week, either in the late afternoon or evening. The minimum basic fee is $6 per unit. Interested persons desiring detailed information regarding organization of classes or current offerings should contact the Dean of Educational Services.

## AUDITORS

Properly qualified persons may apply for admission to attend classes as auditors. Such students pay the same fees as those who take equivalent work for credit.

## TESTS REQUIRED AT REGISTRATION TIME AND LATER

1. A physical examination is required of all students entering or reentering the college after an absence of one semester or more, except that students carrying six units or less are not required to take the physical examination. This examination is scheduled during the orientation period.
2. All entering students are required to take a college aptitude test, and tests for competence in mathematics and in speech. Remedial courses are established in mathematics and speech for students failing these tests. Exceptions may be made for graduate students and for those who register for six units or less and for those registered only in Extended Day classes.
3. All entering freshmen and college transfer students who present less than 12 semester units of college credit must take the regular battery of achievement and aptitude tests, including tests for competence in English, mathematics, and speech. Remedial courses are established for students failing these tests.
4. Students entering teacher education should see admission requirements outlined under Admission to Teacher Education.

## LATE REGISTRATION

Students who register after the scheduled registration days are subject to a late registration fee of $2. Students may be accepted for late registration with the approval of the Registrar within two weeks after scheduled registration days. Registration will be closed after that date. Students failing to complete all registration requirements within the period allowed, as announced in registration instructions, are subject to cancellation of registration.

## CHANGES IN REGISTRATION

A student is responsible for any change in his program after the registration book has been filed. Forms for changes in program must be secured at the Registrar's Office. A fee of $1 is charged.

# GENERAL REGULATIONS

## INFORMATION

Inquiries relative to the college should be directed to the Registrar's Office.

## NUMBERING OF COURSES

Courses numbered 1 through 99 are in the lower division; those numbered 100 through 199 are in the upper division; and those numbered 200 or over are in the graduate division. Courses numbered 300 or over are professional education courses on the graduate level.

## SCHOLARSHIP, GRADES, AND GRADE POINTS

The following grades are used in reporting the standing of students at the end of each semester: A, excellent; B, good; C, fair; D, passed; F, failed; I, incomplete; E, conditioned (may be made up to grade of D); Cr. credit (without grade); WP, withdrawal passing; and WF, withdrawal failing.

Grades of I or E must be made up by the end of the next semester; otherwise the grade of F will be recorded.

Grade points are assigned as follows: Grade A, 3 points per unit; B, 2 points per unit; C, 1 point per unit; D, no point per unit; F or WF, no point per unit. Grades of I, Cr, or WP are disregarded in computing grade points. The grade of E is treated as no point per unit until a final grade is recorded. The number of grade points a student has earned in a subject is determined by multiplying the number of points he has received by the number of units allowed. The grade point average is determined by dividing the grade points earned by the number of units attempted. A student must earn at least a C average in all work undertaken at the college to qualify for a degree or a transcript of record with recommendation to another collegiate institution. Any course may be repeated, but not for additional credit; however, only the second grade earned is considered in the student's average.

## CLASS, UNITS OF WORK, AND STUDY LIST LIMITS

Students who have completed 0 to 29 units of work are classified as freshmen; 30 to 59 units as sophomores; 60 to 89 units as juniors; and 90 or more as seniors.

A unit of credit represents 50 minutes of lecture or recitation combined with two hours of preparation per week through one semester, or three hours of laboratory or field work in the case of laboratory credit.

Students are not ordinarily permitted to enroll for more than 16½ units of credit toward graduation. A normal semester's program is 16 units.

Certain exceptions to this rule exist. If during the preceding semester the student has carried at least 12 units: (1) and a grade point average of at least 1.5 was earned, 17½ units may be carried for credit toward graduation; (2) and a grade point average of 2.0 was earned, 18½ units may be carried.

Exceptions to these regulations may be secured only through a petition to the Scholarship Committee.

No student may register for less than 12 units (the minimum full-time load) without the approval of the Dean of Instruction.

## PROBATION AND DISQUALIFICATION

### PROBATION

Any student whose scholarship record shows a cumulative deficit of seven or more grade points below a C average for all college work undertaken or for all work taken at this College will be placed on probation. Probation may be continued provided the student does not increase his grade point deficiency. The student will remain on probation until the grade point deficiency has been reduced below seven for all work undertaken and all work taken at this college.

A student in provisional status who does not reclassify to regular status upon the completion of 24 units of work will be placed on probation. Probation may be continued until the student is reclassified to regular status, provided the grade point deficiency is not increased.

A student with advanced standing from another college who has been admitted on probation by the Board of Admissions will remain on probation until all grade point deficiencies have been removed and an over-all grade point average of 1.0 has been attained.

### DISQUALIFICATION

Any student on probation whose scholarship falls belows a grade point average of 1.0 in any single semester is disqualified from further attendance at the college.

Any student who fails to pass one-half of the units attempted during any single semester is disqualified from further attendance at the college.

A disqualified student may be reinstated for reasons satisfactory to the Board of Admissions. Applications for reinstatement must be made on forms which may be obtained at the Office of the Registrar.

## WITHDRAWALS FROM CLASS

Forms for withdrawal from class may be obtained at the Registrar's Office. If a student withdraws from class during the first seven weeks of a semester, a grade of WP will be recorded upon his permanent record for each class which he has dropped. If he withdraws during the remainder of the semester, either a WP or WF will be recorded, depending on whether he is passing or failing the course at the time. WF is equivalent to a failing grade.

## TRANSCRIPTS OF RECORD

Students may secure upon request one transcript of record without fee. Thereafter, a fee of $1 is charged for each transcript secured upon request. Once a student has matriculated in this college, transcripts from other schools will not be returned, or copies of them made. No fees are charged for transcripts required for military purposes.

Transcripts in the possession of students are to be regarded as unofficial records.

## EVALUATIONS

An evaluation of credit for graduation should be requested by a student as soon as 45 units have been earned. Applications may be made at the Office of the Registrar. Students having met all admission requirements for the arts and sciences or teacher education curricula, who are carrying 6 units, or more, of college work in a regular semester, will not be charged the evaluation fee.

An evaluation remains in effect so long as a student completes 12 units of work at San Diego State College within each two-year period beginning wth the term immediately following the one in which the evaluation is made (includes summer session term). Any evaluation is subject to changes in requirements imposed on the College by the State Board of Education.

## ELIGIBILITY FOR DIRECTED TEACHING

No student shall be eligible for directed teaching (Education 116) leading to the kindergarten-primary, general elementary, general junior high, and special secondary credentials who has not completed 75 units, been admitted to Teacher Education, and whose entire record, as well as for the preceding semester, does not average at least a 1.2 for all credentials except the junior high and general secondary credentials which require a 1.5 grade average.

No student shall be eligible for directed teaching (Education 316) leading to the general secondary credential who has not been admitted to the teacher education program prescribed for admission to candidacy for this credential.

## THE HONORS PROGRAM

Any student who at the end of the sophomore year has either attained an over-all grade point average of 2.5 or who has attained a grade point average of 2.75 in his major and not less than 2.0 in fields outside his major, and who has received the approval of his department or departments, may elect the honors program. Such election will enable the student to pursue a special program as outlined below. Any student who feels that his qualifications approximate closely the scholarship standards stated above may request admission to the honors program, subject to the approval of his department or departments, and of the Committee on Honors.

Any student who wishes to apply for entrance into the honors program may do so by filling out cards to be obtained from the Registrar's Office. The application should be approved by the 10th calendar day following the first day of instruction. Units earned by students doing individual study under this plan will be recorded under the symbol 166 and will be subject to the formulated rules dealing with limitations of student load.

Students in the honors program, so far as the facilities of the department and the best interests of the students under its charge allow, shall be treated as benefits their individual needs and as their individual capabilities warrant. They shall be eligible to enroll in honors or special study courses, credit in such courses to be limited to six units per semester unless otherwise recommended by the major department or departments and approved by the Honors Committee. In addition, they shall not be held to regular attendance in the established courses of their departments if, in the opinion of the instructor, the objectives of such courses can be achieved through special assignments and examinations. With the consent of the major department or departments, requirements concerning minors and specific courses or sequences in the major may be modified. Each honor student shall be assigned to a member of his major department for advice and direction.

Students in the honors program who fail to take advantage of the opportunities there offered may at the end of any semester be required to withdraw from the honors program upon notification of the major department or departments. Students not in the honors program who show unusual capacity, may request to be transferred to the honors program contingent upon recommendation of the department and the Committee on Honors at the end of any semester.

## THE DEGREE WITH HONORS AND WITH DISTINCTION

Upon recommendation of the Committee on Honors, graduation with honors shall be granted to the upper 10 percent of the graduating class. Each department shall determine which students it will recommend for distinction in the major field at graduation, and report its recommendation to the Committee on Honors for transmission to the faculty.

## EXAMINATIONS

No final examination shall be given to individual students before the regular time. Any student who finds it impossible to take a final examination on the date scheduled must make arrangements with the instructor to have an incomplete grade reported and must take the deferred final examination not later than the end of the first semester of attendance following that in which the incomplete was given. No exception shall be made to this rule without the approval of the Dean of Instruction and the instructor concerned.

## CREDIT FOR EXTENSION COURSES

The maximum amount of extension credit which may be accepted toward the minimum requirements for the bachelor of arts or the bachelor of science degree is 24 semester units, not more than 12 of which may be transferred from another college or university. The term "extension credit" refers to both extension class work and work taken by correspondence. Extension credit does not count in satisfaction of the minimum residence requirement. **Extension courses are not accepted for graduate credit toward the master's degree.**

## CREDIT GRANTED FOR MILITARY SERVICE

The college will grant credit for military service schools in compliance with recommendations made by the American Council on Education.

# THE MASTER OF ARTS DEGREE

## NATURE OF THE DEGREE

The Master of Arts Degree is offered at San Diego State College in the field of teaching and for other educational services. Students receiving the degree must hold a valid regular day school service California credential other than an emergency or provisional credential; or be a foreign citizen preparing to teach in foreign countries; or be a licensed teacher from another state with one year of experience; or be an approved applicant prepared to teach in institutions not requiring teaching credentials. Students may elect to concentrate in a subject matter major or in education. The following areas of concentration are now available:

*Teaching Majors:* Chemistry, business education, English, foreign language, health and physical education, history, life science (botany and zoology), physics, psychology, and social science.

*Education:* Elementary, secondary, administration and supervision, and student personnel services.

*School Psychologist and School Psychometrist:* Psychology or educational psychology.

## REQUIREMENTS

Students who meet the following requirements are eligible for graduation with the master's degree:

A. 30 units of approved graduate work beyond the bachelor's degree. These 30 units must be completed within the seven years immediately preceding the date when all of the requirements for the degree are completed, excepting that at the option of the college the time may be extended for students who pass a comprehensive examination.

B. 24 units in residence. Courses taken prior to the summer session of 1946 at San Diego State College, or any other California State College, may **NOT** be used as graduate work.

C. Grade point average of 2.0 in all work taken after the bachelor's degree. (Grade of A, 3 grade points; B, 2 grade points; C, 1 grade point; D, 0 grade points).

D. Completion of the requirements for an approved California teaching credential, or the holding of one, such as the general elementary, general secondary, junior high, special secondary school, and school psychometrist credentials; or be a foreign citizen; or be a licensed teacher in another state, with one year of experience; or be preparing to teach in an institution which does not require a credential.

E. Satisfactory completion of the candidate's degree program as approved by the Graduate Committee.

## ADMISSION TO GRADUATE STUDY

A. Graduate Status may be granted to applicants who have regularly applied and have filed official transcripts as evidence of their possession of a bachelor's degree from an accredited institution.

B. Provisional admission to graduate study, Graduate Special Status, may be granted to one who holds a bachelor's degree from an unaccredited college. Such a student will be eligible for Graduate Status when he has earned a grade point average of 1.5 on 12 or more units of approved upper division work at this college and has cleared all undergraduate deficiencies. Special Status is given also to those students who have not completed the regular admission procedures.

## ADMISSION TO CANDIDACY

A candidate for the master's degree must qualify as follows:

A. Apply for admission to candidacy at the Graduate Office. Students should apply during the first graduate term in attendance. Admission cannot be completed, however, until the student has earned 12 units at San Diego State College, or six units if his undergraduate grade point average was 1.5 or better.

B. Earn and maintain a grade point average of 2.0 on all graduate work.

C. Satisfactorily complete the following: (1) scholastic aptitude test for graduates, (2) scholastic achievement test, (3) personal interviews and speech test, and (4) health and physical examination, if the applicant does not hold a California teaching credential.

D. Secure adviser's approval of: (1) a complete program of study for the degree, and (2) a master's project or thesis.

## GENERAL REGULATIONS

A. Extension and correspondence courses are not acceptable toward the degree.

B. Maximum study load: Summer session, one unit per week of attendance; fall or spring, 15 units per semester of full-time attendance. If employed full time, five units of courses numbered 100-199 or 3 units of courses numbered 200-298.

C. All candidates shall complete two units in Education 290 and one additional unit in a course in bibliography (290) in the major department.

D. Each applicant shall complete a project or thesis for which three units of credit are allowed.

E. The minimum requirement for concentration in a major shall be four units of courses numbered 200-298; six additional units in the major or an approved related field, selected from upper division or graduate courses; a project or thesis; and one unit in bibliography.

F. 12 units of work must be earned after admission to candidacy.

G. 10 units must be in courses numbered 200-299.

H. The examination on the thesis will consist of two conferences between the student and his Thesis Committee; one for planning, which is to be held immediately after the appointment of the committee, and one for evaluation at the time of completing the first draft of the thesis.

I. The project or thesis must be completed four weeks in advance of the date of the convocation at which the degree is to be conferred.

# GENERAL REQUIREMENTS FOR THE BACHELOR OF ARTS AND BACHELOR OF SCIENCE DEGREES

## TYPES OF CURRICULA

San Diego State College offers two types of curricula leading to the A.B. and B.S. degrees:

(1) The curricula leading to the California teaching credentials, and

(2) The curricula in arts and sciences.

## GRADUATION REQUIREMENTS

Any student who enters San Diego State College for the first time, beginning with Summer Session 1951, must complete requirements of 124 units for the A.B. degree or 128 units for the B.S. degree.

Any student who has completed 12 units of work at San Diego State College has the option of being graduated under the requirements in effect for 1950-1951 (120 units) or the requirements to be in effect for 1951-1952. If he chooses the first set of requirements, he must earn 12 units within each two year period, beginning with Summer Session 1951, to remain eligible for graduation under those requirements. Otherwise, a new evaluation for the new requirements will be required.

### GRADUATION REQUIREMENTS EFFECTIVE 1951-1952

(a) A minimum of 124 semester units for the A.B. degree or 128 semester units for the B.S. degree, representing a four-year college course, are required for graduation.

(b) The last 24 units of work leading to the bachelor's degree must be completed in residence at this college.

(c) At least a C average (1.0) in scholarship is required in all college work attempted, in all work taken at this college, and in all upper division work in the major field.

(d) At least 40 upper division units are required for the A.B. degree or at least 36 upper division units for the B.S. degree.

(e) The state requirements in United States history, Constitution, and American ideals must be completed for the A.B., B.S., or B.Ed. degree.

(f) All requirements in general education, the major and minor fields and any other requirements made by the college must be completed for graduation.

### ENGLISH, MATHEMATICS, AND SPEECH TESTS

Each student must demonstrate competence in the use of English, mathematics, and speech as determined by tests administered by the college. Students failing to pass these tests satisfactorily are required to enroll in special remedial courses designated by each department concerned. Passing the tests or completion of designated courses is a requirement for graduation.

### UNITED STATES HISTORY, CONSTITUTION, AND AMERICAN IDEALS

Each student of a state college to qualify for graduation shall demonstrate competence in United States history, Constitution, and American ideals by passing a comprehensive examination on these fields prepared and administered by the college, or by completing appropriate courses. Students transferring from other institutions of collegiate grade, who have already met this requirement, are not required to take further courses or examinations therein.

This graduation requirement may be fulfilled by any one of the following alternatives:

(1) By satisfactorily passing comprehensive examinations in both United States history, Constitution, and American ideals.

(2) By satisfactory completion of one of the following groups of courses:
- (a) History 17A and 17B
- (b) History 172A and 172B
- (c) Political Science 71A and 71B
- (d) Political Science 139A and 139B

(3) By satisfactorily passing a comprehensive examination in United States history, American institutions and ideals and completion of one of the following groups of courses:
- (a) Political Science 101
- (b) Political Science 137A and 137B

(4) By satisfactorily passing a comprehensive examination in the United States Constitution and completion of one of the following groups of courses:
- (a) History 8A and 8B
- (b) History 179A and 179B

(5) By completion of one of the following groups of courses covering United States history, American institutions and ideals and completion of one of the following groups of courses covering the United States Constitution:

| *Courses on U. S. History* | *Courses on U. S. Constitution* |
|---|---|
| (a) History 8A and 8B | (a) Political Science 101 |
| (b) History 179A and 179B | (b) Political Science 137A and 137B |

(6) By completion of the graduation requirement in United States history, Constitution, and American ideals in other institutions of collegiate grade.

## LOWER DIVISION AND UPPER DIVISION COURSES

A student is considered to have lower division standing until he has earned 60 semester units, at which time he attains upper division standing.

Courses numbered 1-99 are lower division courses; courses numbered 100-199 are upper division courses.

A student with lower division standing is not eligible to take upper division courses, with the following exceptions: A student in the last semester of his sophomore year who is approaching upper division standing carrying sufficient lower division units to complete the required minimum of 60 units may carry upper division units for the remainder of his study load. A student with sophomore standing may carry upper division courses for upper division credit provided that he has the written approval of the chairman of the department and the Dean of Instruction. This written approval must be filed in the Office of the Registrar on the form "Adjustment of Academic Record." Blank forms may be obtained by the student at the Office of the Registrar.

## APPLICATION FOR OFFICIAL EVALUATION

Immediately upon completion of 45 units of work, the student should apply to the Registrar's Office for an official evaluation in terms of his major field and requirements for graduation. An evaluation is a summary of work completed and requirements to be completed for the degree and/or teaching credential. Students who delay in requesting official evaluations may be subject to any additional requirements made by the college from time to time. Students receiving official evaluations who continue uninterrupted attendance at this college are held only to the requirements in effect at the time the evaluation is made, except in cases where the State Department of Education imposes new regulations.

## TRANSFER TO GRADUATE SCHOOLS

Attention of students who plan to transfer to the graduate school of the University of California is called to the fact that the university reserves the right to evaluate and possibly reduce the credit in certain work in which this college has given credit toward the baccalaureate degree. Examples of such work would be credit for nurse's training, credit transferred from certain foreign schools, and certain vocational courses in junior colleges.

## GENERAL EDUCATION REQUIREMENTS

Forty-five semester units in courses designated in the college bulletin and in the schedule of classes as general education must be completed in addition to courses required in the major field. These courses must be selected from the fields listed below with completion of the minimum number of units required and not exceeding the maximum number of units allowed in each field in order to satisfy the requirement of 45 units in general education. The pattern requirements in general education may be fulfilled by examinations with an accompanying reduction in the 45 units but without course credit.

For specific explanation of the requirements within each field of general education, refer to the explanation of requirements below.

| | *Minimum* | *Maximum* |
|---|---|---|
| (a) Social Sciences | 9 | 12 |
| (b) Natural Sciences | 9 | 12 |
| (c) Literature, Philosophy, and the Arts | 6 | 12 |
| (d) Communication: | | |
| Oral Communication | 2 | 2 |
| Written Communication | 3 | 6 |
| (e) Psychology | 3 | 6 |
| (f) Physical and Health Education: | | |
| Physical Education | 2 | 2 |
| Health Education | 2 | 2 |
| (g) Mathematics | 0 | 6 |
| (h) Foreign Languages | 0 | 6 |
| (i) Family Life Education | 0 | 6 |
| Total number of units required | 45 | |

### EXPLANATION OF REQUIREMENTS

(a) **Social Sciences:** A minimum of nine or maximum of 12 units must be selected from general education courses with at least three units in two or more of the following fields: anthropology, economics, geography (except Geography 1), history, political science, social science, sociology, and similar fields, including the required instruction in United States history, Constitution, and American ideals. **NOTE:** Courses in business, library science, philosophy, or psychology may not be used to satisfy the social science requirement.

(b) **Natural Sciences:** A minimum of nine or maximum of 12 units must be selected from general education courses in the natural sciences. At least one course of not less than three units must be selected in the life sciences from biology, botany, physiology, zoology, and similar fields; and at least one course of not less than three units in the physical sciences from astronomy, chemistry, Geography 1, geology, physics, physical science (except Physical Science 10), and similar fields. At least one course must include laboratory work for a minimum of one unit or the three-hour equivalent. **NOTE:** Courses in engineering, industrial arts, mathematics, or photography, may not be used to satisfy the natural science or laboratory requirement.

(c) **Literature, Philosophy, and the Arts:** A minimum of six or maximum of 12 units must be selected from general education courses in literature, philosophy, and the arts. At least one course of not less than three units must be selected in iterature or in philosophy from courses in English, comparative literature, philosophy, or similar fields. Courses in the arts must be selected from the fine arts, including aesthetics, art, and music, or from the practical arts. A maximum of three units may be counted in the practical arts toward general education.

(d) **Oral and Written Communication:** Two units must be completed in oral communication by passing Speech Arts 3. Students failing the Speech Test are required to register concurrently in Speech Arts 2, Oral Communication Laboratory, for one unit of credit which may not be counted toward general education requirements.

A minimum of three units, with a maximum of six units, must be selected from courses in written communication. All students must complete three units in English 1 or 41. Students failing the English Test are required to complete English A, or 40, or two units as a prerequisite for other courses in English. English A or 40 may not be counted toward general education requirements.

(e) **Psychology:** Three units must be completed in Psychology 1, or 40. An additional three units may be selected from other general education courses in psychology.

(f) **Physical Education and Health Education:** Two units must be completed in Health Education 21 and two units must be selected from general education courses in physical education.

The physical education requirement must be satisfied by completion of four semesters of activity courses for a minimum and maximum of two units. **NOTE:** Not more than one activity course may be counted within any semester and an activity course may not be repeated for credit, except courses designated as varsity sports.

(g) **Mathematics:** From zero to six units may be selected from general education courses in mathematics. Students failing the Mathematics Test must complete Mathematics X. This course may not be counted toward the general education requirements. **NOTE:** Any year-course in mathematics completed in high school may not be repeated in college for credit.

(h) **Foreign Languages:** From zero to six units may be selected from general education courses in foreign languages. **NOTE:** Year-courses in foreign languages completed in high school may not be repeated in college for credit, except that the last year-course in any foreign language sequence completed in high school may be repeated in college for a maximum of three units of repeated work to be applied toward graduation.

(i) **Family Life Education:** From zero to six units may be selected from general education courses in family life education. Courses in family life education may be found in the fields of business, health education, home economics, psychology, and sociology.

## COURSES IN GENERAL EDUCATION

Courses selected from the following groups may be counted toward the 45 units required in general education, unless the course is specifically required as part of the student's major field and within the limitations indicated in the section on General Education Requirements.

### Social Sciences

Anthropology
- 1A-1B
- 54
- 152
- 165

Economics
- 1A-1B
- 102
- 111
- 131
- 170

Geography
- 2
- 10
- 145

History
- 4A-4B
- 8A-8B
- 17A-17B
- 121A-121B
- 172A-172B
- 179A-179B

Political Science
- 1A-1B
- 71A-71B
- 101
- 105
- 111A-111B
- 137A-137B
- 139A-139B
- 150A-150B

Social Science
- 40
- 45

Sociology
- 45
- 50
- 51
- 110
- 135

## Natural Sciences

Astronomy
1
2
9
101
105

Biology
1
3
4
41

Botany
150
160

Chemistry
2A-2B

Geography
1

Geology
2
3
4

Physical Science
1
2
41
150

Physics
2A-2B
3A-3B
148

Zoology
150
160
165

## Literature, Philosophy, and the Arts

Aesthetics
2
5
50
51
102
138
150
162

Art
6A
8

Comparative Literature
52A-52B
101A
104A-104B
115
138
140A-40B
142
152A-152B

English
2A-2B
42
52A-52B
117A-117B
119A
126B
134
149
152A-152B

Music
7A
10A-B
70A-B (170A-B)
75A-B-C-D (175A-B-C-D)
80A-B-C-D (180A-B-C-D)
85A-B-C-D (185A-B-C-D)
86A-B-C-D (186A-B-C-D)
87A-B-C-D (187A-B-C-D)
88A-B-C-D (188A-B-C-D)

Philosophy
1A-1B
3A-3B
101
129

Practical Arts
Industrial Arts 5
Industrial Arts 6
Home Economics 5
Home Economics 10
Library Science 10
Physical Science 10

## Communication—Psychology

Oral Communication
Speech Arts 3

Written Communication
English
1
41
61
106

Psychology
1
41
106
145

## Health Education—Physical Education

Health Education
21

Physical Education (Men)
1A-1B-1C-1D
2
2A-2B
3
4
5
6
7
8
9
10
11A-B
13
14
15
16
17
18
19
20
23
24

Physical Education (Women)
1A-1B
2A-2B
3A-3B
4
5
6
11A-11B
12A-12B
13A-13B
14A-14B
16A-16B
18A-18B-18C
19A-19B
20A-20B
21
23
24

## Foreign Languages

French
1
2
3
4
15
16
115
116

German
1
2
3
4
15
16
115
116

Latin
1
2
3
4

Spanish
1
2
3
4
15
16
115
116

## Mathematics—Family Life Education

Mathematics
B
G
7A-7B
104

Family Life Education
Business 20
Health Education 90
Home Economics 1
Home Economics 135
Home Economics 150
Home Economics 170
Psychology 106
Sociology 45
Sociology 135

# BACHELOR OF ARTS DEGREE IN ARTS AND SCIENCES

## MAJOR AND MINOR REQUIREMENTS

One major field is required for the A.B. degree in addition to 45 units in general education courses. At least 40 units of the 124 required for graduation must be in courses carrying upper division credit.

The major in arts and sciences consists of a minimum of 24 upper division units with prerequisite and related lower division courses as prescribed by the department offering the major.

The minor in arts and sciences may be required by the department offering the major. In departments not requiring a minor, the minor is optional with the student. A minor consists of a minimum of 15 units, or maximum of 22, six units of which must be in courses carrying upper division credit.

### Majors

Majors in Arts and Sciences are offered in the following fields:

Art
Botany
Business
Chemistry
Economics
English
French
Geography
History
Journalism
Life Science
Mathematics
Music
Physical Education
Physics
Political Science
Psychology
Romance Languages
Social Science
Sociology
Spanish
Speech Arts
Zoology

### Minors

Minors in Arts and Sciences are offered in the following fields:

Air Science
Anthropology
Art
Astronomy
Bacteriology
Botany
Business
Chemistry
Comparative Literature
Economics
Education
Engineering
English
French
Geography
Geology
Health Education
History
Home Economics
Industrial Arts
Journalism
Life Science
Mathematics
Music
Philosophy
Physical Education
Physics
Political Science
Psychology
Recreation
Sociology
Spanish
Speech Arts
Zoology

### General Major in Vocational Curricula

The general major is planned for students who are preparing for vocations requir- g a background of general training. General majors are offered in the following curri- la: *Home arts, inter-American relations, prelegal, personnel management, public lministration, recreation, social work.*

Students not electing one of these curricula who need a general type of training r other vocational objectives must consult with the Dean of Instruction before per- ission may be granted to follow the pattern for the general major.

In addition to the general education requirements, a student taking the general ajor must complete 36 upper division units chosen from three fields with not more an 15 units nor fewer than nine units from any one field. A minimum of a year-course each field must be completed in the lower division as foundation for upper division ork in the general major. A minor is not required; however, four additional upper vision elective units must be completed to meet the minimum requirement for 40 upper vision units for graduation.

All students following the pattern for the general major must obtain forms from e Office of the Dean of Instruction, complete the forms, and have the general major proved by the Dean of Instruction. The forms will then be submitted by the student the chairman of each of the three departments comprising the general major for proval, revision, or rejection.

# BACHELOR OF SCIENCE DEGREE IN ARTS AND SCIENCES

## REQUIREMENTS FOR THE MAJOR

One major field is required for the B.S. degree in addition to 45 units in general education courses. A minimum of 128 units is required for graduation. A minor field is not required.

The major consists of a minimum of 36 upper division units with prerequisites and related courses in the lower division as prescribed by the department offering the major. These lower division courses are considered part of the major and may not be counted toward the 45 units in general education, except as may be specified in each major field.

### Majors

Majors are offered in the following fields:

Botany
Chemistry
Engineering
Laboratory Technique
Life Science
Physics
Zoology

# PROFESSIONAL CURRICULA IN TEACHER EDUCATION

## ADMISSION TO TEACHER EDUCATION

Students who expect to become teachers should apply for admission to teacher education during the first semester of the sophomore year. Students entering the college at the end of the sophomore year will apply at the beginning of the junior year. No courses in education may be taken until admission is granted; any exception to this rule must have the approval of the Chairman of the Education Division. The standards for admission to Teacher Education are different from those for admission to the college; therefore, *admission to the college does not guarantee that the student will be admitted to teacher education.* The following requirements must be met for admission to the eacher education curricula:

1. A satisfactory score on the college aptitude test taken at the college.
2. Evidence of competence in the use of the English language and of satisfactory ability in arithmetic, handwriting, reading, and spelling indicated by having passed the Fundamentals Test. (See college calendar for dates of test which should be taken in the second semester of the *freshman year.*)
3. Assurance of correct speech habits and voice control by having satisfactorily completed a course in corrective speech or by having passed a speech test given by the college.
4. Assurance of physical fitness.
5. If the student is to be a candidate for the general secondary credential or one of the special secondary credentials, he must furnish a recommendation from the chairman of that department stating that the student has ability and shows promise of teaching success in his field and that the department looks with favor upon his application.
6. The completion of the first two years or more of a given curriculum, or its equivalent, and of subsequent work with a grade point average of 1.2 or better for all credentials except the general junior high school or the general secondary, for which shall be required a grade point average of 1.5 or better in all work and 1.75 in the major field.
7. If the student is a candidate for any credential on the secondary school level (general junior high school, special secondary, or general secondary), or for the school psychometrist credential, he must have a satisfactory score on a General Culture Test.
8. If the student is a candidate for the general secondary credential, he must have a tentative program approved by the authorized departmental representative of his major field and the representative of Secondary Education.
9. All applicants need to be approved by an interviewing committee of the college faculty. In its evaluation the committee will consider the following factors established by the State Board of Education: intelligence, scolarship, professional aptitude, personality and character, speech and language usage, and many-sided interests.
10. Candidates for the school psychometrist credential must attain a satisfactory score on a comprehensive examination in psychology.

### Transfer Students

Students who have completed two or more semesters of work in another college, on transferring to San Diego State College, should make application for admission teacher education as soon as they enroll in the college. Transfer students admitted the college with either upper division or graduate standing must take the necessary sts for admission to teacher education given during the orientation period at the ginning of their first semester at the college. (See college calendar for dates.)

### Transfer Students With Emergency Credentials in Elementary Education

Certain adaptations in the education courses have been made to meet the need of experienced teachers who hold an emergency credential in elementary education. Se the Coordinator of Elementary Education for details.

### Advanced Standing in Teacher Education

A student transferring into San Diego State College with advanced standin must complete a minimum of six units of professional education work in residence a San Diego State College before recommendation for a credential, regardless of exten of education work already completed elsewhere. Whenever a transfer student has ha teaching experience, the college requires that a statement from the employer(s) b filed with the Registrar.

### Evaluation of Credits

After an interval of five years, courses in education are reevaluated and subjec to reduction in credit, in light of such new requirements as may have been put int effect and changes in educational procedures. Students formerly in attendance wil not be considered to be working in the curriculum until an evaluation and statemen of credit has been secured from the Registrar's office. All courses taken either at thi college or elsewhere must be approved by an official adviser in order to be credite toward meeting credential requirements or pattern requirements for a degree.

## TEACHING CREDENTIALS

San Diego State College is authorized by the State of California to recommend students for the teaching credentials listed below. To be recommended, students must complete, or have completed, the A.B. degree in one of the curricula offered for teachers.

| *The credential* | *Subjects and grades for which it is valid* |
|---|---|
| General Elementary | All grades through the eighth. |
| Kindergarten-Primary | Kindergarten through third. |
| General Junior High (must be taken with a minor in industrial arts or home economics, or with another credential) | All subjects in grades seven, eight and nine in all elementary or secondary schools. |
| General Secondary | All subjects in the public schools in grade 7 and above. |
| Health and Development | Authorizes to serve as supervisor of health in the capacity of a school physician, school nurse, school oculist, school optometrist, school otologist, school audiometrist, school dentist, school chiropdist, or school dental hygienist. |
| Special Secondary in Art | Art in all grades of the public schools. |
| Special Secondary in Business Education | Business education subjects in all grades of the public schools. |
| Special Secondary in Music | Music in all grades of the public schools. |
| Special Secondary in Physical Education | Physical education in all grades of the public schools. |
| Special Secondary in Speech Arts | Speech in all grades of the public schools. |
| Special Secondary in Correction of Speech Defects | Correction of speech defects in all grades of the public schools. |
| Special Secondary for teaching the Mentally Retarded Child | To teach mentally retarded children in elementary and secondary schools. |
| School Psychologist | To serve as school psychologist. |

| | |
|---|---|
| School Psychometrist | To serve as assistant to the school psychologist. |
| Administration in Elementary Education | Authorizes for certificate to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in elementary schools. |
| Supervision in Elementary Education | Authorizes for certificate to supervise instruction in elementary schools. |
| Administration in Secondary Education | Authorizes for certificate to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in secondary schools. |
| Supervision in Secondary Education | Authorizes for certificate to supervise instruction in secondary schools. |
| Special Subject Supervision | Supervision in the special subject in all grades. |

## COMBINATION OF CREDENTIALS

Students who seek more than one teaching credential must complete in full the curriculum for each, with only such exceptions as are indicated in the statement of requirements.

A combination of the elementry school credential and the junior high school credential may be secured by completing the requirements for the elementary school credential and the following additional requirements.

(a) A junior high school teaching major.
(b) Education 100B in the major field.
(c) Three units of directed teaching, or equivalent, in a junior high school.
(d) Education 115B.

A combined program leading to the junior high and general elementary credentials imultaneously is being worked out during 1951-52. Entering students interested in uch a program should request an adviser working in this revision.

A combination of the junior high school credential and a special secondary credential may be secured by completing the requirements for the special secondary credential and the following additional requirements:

(a) A junior high school teaching major, excluding the special secondary credential majors, and a teaching minor. This minor may be the special secondary field.
(b) Education 100B in the junior high school teaching major.
(c) Three units of student teaching in the junior high school teaching major.

# GENERAL ELEMENTARY AND KINDERGARTEN-PRIMARY CREDENTIALS WITH THE BACHELOR OF ARTS DEGREE

The general elementary and kindergarten-primary credentials are granted with e A.B. degree in teacher education. One major in Education, in addition to 45 units general education courses, and one teaching minor are required for either credential d the degree. Curricular outlines for these credentials may be obtained from the oordinator of Elementary Education.

Summary of unit requirements:

| | *Units* |
|---|---|
| General education | 45 |
| Major in education | 39–42 |
| Additional units, including minor and pattern requirements for the credential | 40–41 |
| Total number of units required for graduation | 124 |

### Major for the General Elementary Credential

The major consists of 39 upper division units to include the following courses: Education 102A-102B (6 units) ; Education 147 (10 units) ; Education 148 (12 units) ; Education 115A (2 units) ; Education 116 (7 units) ; and Health Education 151 (2 units).

Lower division background courses for the credential include: Social science to include regional geography (9 units) ; natural science to include physical geography (12 units) ; literature, philosophy, and the arts to include courses in music fundamentals, music methods, arts and crafts, and design (12-15 units) ; physical education to include games and activities for the elementary school (2½ units).

### Major for the Kindergarten-Primary Credential

The major consists of 42 upper division units to include the following courses: Education 102A-102B (6 units) ; Education 147 (10 units) ; Education 148 (12 units) ; Education 116 (6 units) ; Education 146 (4 units) ; Education 115A (2 units) ; and Health Education 151 (2 units).

Lower division background courses for the credential include: Social science (9 units) ; natural science (12 units) ; literature, philosophy, and the arts to include courses in music fundamentals, music methods, piano, arts and crafts, and design (13-15 units) ; physical education to include games and activities for the elementary school (2½ units).

### Minor

A teaching minor for the general elementary and kindergarten-primary credentials consists of a minimum of 15 units in one field, six units of which must be in courses carrying upper division credit. Minors are offered in the following fields.

English
Foreign Languages
General Science
Industrial Arts
Mathematics
Physical Education
Social Science
Speech Arts

The minor in English must include three units in American literature. The minor in foreign languages may be in one or more of the foreign language fields. The minor in general science must be made up of courses selected from the general secondary credential minor in life science and general science or physical science and general science. The minor in social science must include six upper division units in history or in geography and further work in either lower or upper division selected from anthropology, economics, geography, history, political science, or sociology.

A second minor, though not required, may be chosen from art, health education, home economics, industrial arts, music, physical education, or recreation.

Students taking the general elementary or kindergarten-primary credential in combination with a special secondary credential may use the special secondary major for the minor in the elementary or kindergarten-primary fields.

## GENERAL JUNIOR HIGH SCHOOL CREDENTIAL WITH THE BACHELOR OF ARTS DEGREE

The general junior high school credential is offered to students with minors in home economics or industrial arts or to students who wish to take this credential in combination with a general elementary, kindergarten-primary, or special secondary credential. The general junior high school credential is granted with the A.B. degree in teacher education.

One teaching major and one teaching minor, in addition to 45 units in general education courses, are required of all students taking this credential. Students not taking this credential in combination with another credential are required to complete 24 units in professional education courses and a minor in home economics or industrial arts. Students taking this credential in combination with another credential should refer to the section of the bulletin entitled: Combination of Credentials.

## Teaching Majors and Minors

Teaching majors and teaching minors are offered in the following fields:

| *Teaching Majors* | *Teaching Minors* |
|---|---|
| English | Home Economics |
| Foreign Languages | Industrial Arts |
| General Science | or |
| Mathematics | The special secondary field for the combination credentials |
| Social Science | |

Summary of unit requirements:

| | *Units* |
|---|---|
| General education | 45 |
| Teaching major | 24 |
| Teaching minor | 15 |
| Professional courses in education | 24 |
| Electives | 16 |
| Total number of units required for graduation | 124 |

## Teaching Major

A *teaching major* consists of a minimum of 24 units, at least 18 units of which ust be in courses carrying upper division credit. Courses in the major field may not e counted toward the 45 units required in general education courses.

A *teaching major in English* shall consist of six units in a lower division year-ourse, and 18 units in English courses carrying upper division credit, including three nits in American literature and three units in Shakespeare. Recommended as part f the major: English 192.

A *teaching major in foreign languages* may include one or more of the foreign nguages for a minimum of 24 units, 18 units of which must be in courses carrying pper division credit.

A *teaching major in general science* shall consist of a minimum of 24 units, at ast 18 units of which must be in courses carrying upper division credit. Six units re required in a life science and six in a physical science. At least 12 units in one field concentration are required, six units of which must be in courses carrying upper vision credit, to be selected from one of the following fields: bacteriology, botany, emistry, physics, or zoology.

A *teaching major in mathematics* shall consist of a minimum of 24 units, at least units of which must be in courses carrying upper division credit.

A *teaching major in social science* shall consist of a minimum of 24 units, at ast 18 units of which must be in courses carrying upper division credit. There shall a concentration of 12 units, at least six units of which must be in courses carrying per division credit, selected from one of the following fields: anthropology, eco-mics, geography, history, political science, or sociology. A year-course in American story must be included in the lower or upper division.

## Teaching Minors

A *teaching minor* consists of a minimum of 15 units, six units of which must in courses carrying upper division credit. Teaching minors are offered in home onomics or industrial arts.

A *teaching minor in home economics* consists of a minimum of 15 units to include ome Economics 5 or 62 and 10 or 11 in the lower division; and Home Economics 0 and 170 in the upper division. Three additional units should be chosen in con-ltation with the adviser in home economics.

A *teaching minor in industrial arts* consists of a minimum of 15 units, six units which must be in courses carrying upper division credit. Required: Industrial Arts or 21 and 121, and at least one lower division and one upper division course in o of the following areas: woodworking, metalworking, and electricity.

### Professional Courses in Education

Professional courses include 24 units in the following: Education 184A-184B-184C, 100B (methods in the major and minor fields), 116; plus Health Education 151.

## SPECIAL SECONDARY SCHOOL CREDENTIAL WITH THE BACHELOR OF ARTS DEGREE

The special secondary school credential is granted with the A.B. degree in teacher education in the following fields: art, business education, music, physica education, and speech arts. Majors in these fields are in addition to 45 units in genera education courses. Professional courses in education are also required. Certain of these credentials require, in addition, a teaching minor in an academic field. For a statement of requirements in the major and in professional education, refer to the credentials below.

Summary of unit requirements:

| | Units |
|---|---|
| General education | 45 |
| Major for the credential | 39–58 |
| Professional courses in education | 22–26 |
| Minor, if required, and electives | 0–18 |
| Total number of units required for graduation | 124 |

### TEACHING MINORS FOR THE SPECIAL SECONDARY CREDENTIAL

A teaching minor is required for the special secondary credential in physica education. A minor is optional for the other special secondary credentials. The minor consists of a minimum of 15 units, or maximum of 22, six units of which must be in courses carrying upper division credit. Courses in the minor may include genera education courses. Teaching minors are offered in the following fields:

English
Foreign languages
General science
Health education
Home economics
Industrial arts
Mathematics
Recreation
Social science

The following teaching minors include certain requirements:

*English:* The minor must include three units in American literature.

*Foreign languages:* The minor must be in one foreign language field.

*General science:* Courses in the minor are to be selected from the minors for the general secondary credential in life science and general science, or physical science and general science.

*Health education:* The minor must include Health Education 65, 90, 152, 145 or 153, 199, and Physical Education 151.

*Home economics:* The minor must include Home Economics 5 or 62 and 10 or 11 in the lower division; and Home Economics 150 and 170 in the upper division. Three additional units should be chosen in consultation with the adviser in home economics

*Industrial arts:* The minor must include Industrial Arts 2 or 21 and 121 and at least one lower division and one upper division course in two of the following areas: woodworking, metalworking, or electricity.

*Mathematics:* See general statement above.

*Recreation:* Lower division requirements: Two units of physical education activity courses, Physical Education 53, and two units chosen from Art 61B, or fields of dance, drama, or music. Upper division requirements: Recreation 165, 170A-170B and 184A or 184B. Recommended: Physical Education 151. Consultation with the chairman of the Recreation Department is advised.

*Social science:* The minor must include courses selected from anthropology economics, geography, history, political science, or sociology. Six units must be in a year-course sequence and six units are required in American history or three units in American history and three units in political science.

## SPECIAL SECONDARY CREDENTIAL IN ART

The major in art consists of 47 units to include the following: Lower division: Aesthetics 5 or 51 and 50 (4 units); Art A-B, 6A-6B, 14A, 61A-61B, and electives in art (20 units). Upper division: Aesthetics 150 (2 units); Art 106A, 112A, 116A, 119A, 194A, and 195 (14 units); electives in art (10 units); and Speech Arts 140A (3 units). Courses in the major may not be counted toward general education requirements.

Professional courses in education consist of 22 upper division units to include the following courses: Education 184A-184B-184C, 116, 100B-A, and Health Education 151.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors above.

## SPECIAL SECONDARY CREDENTIAL IN BUSINESS EDUCATION

The major in business education consists of 54-56 units to include the following: Lower division: Business 1A-1B, 8, 14A-14B, 18A-18B (21 units); plus the requirements in one of the following sub-fields: (1) Accounting: Nine units selected from Business 2, 21, 24, 25, 27; (2) Accounting-Secretarial: Business 5A-5B (if student has credit for Business 1A-1B or 5A-5B, other courses may be substituted in consultation with adviser); (3) Merchandising: Business 24, 25, 27; (4) Secretarial: Business 5A-5B. (If student has credit for Business 1A-1B or 5A-5B, other courses may be substituted in consultation with adviser).

Upper division: Business 103A, 105A-105B, 108, 190 (15 units); plus the requirements in one of the following sub-fields: (1) Accounting: Business 121, 160A, and 164A; (2) Accounting-Secretarial: Business 121; and 160A and 164A, or 113A-113B; (3) Merchandising: Business 121 and six units selected from Business 185, 186, 187A-187B, Art 107; (4) Secretarial: Business 113A-113B.

Professional courses in education consist of 24 upper division units to include the following courses: Education 184A-184B-184C, 116, 100B-T, one of the following: Education 100B-B, 100B-ME, or 100B-S; and Health Education 151.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors above.

## SPECIAL SECONDARY CREDENTIAL IN MUSIC

Students are referred to the opening statement and to the general basic requirements given in the section on Announcement of Courses under music. The student planning to receive this credential is held to the general basic music requirements. Students should consult with the chairman of the music department before registering and plan their course in view of individual variations in background and needs. Before admission to the directed teaching program may be granted, credential candidates must have completed Music 146A-146B and must have passed the minimum State credential requirements in voice and piano, with or without credit, which are as follows:

(a) Piano: Ability (1) to play a Bach two-part invention; (2) to play an artistic accompaniment; (3) to play at sight four-part hymns.

(b) Voice: Ability (1) to sing at least one song representative of each of the following periods of vocal literature: Classic, Romantic, Modern; (2) to sing at sight any part of a four-part hymn.

Students whose background in piano is inadequate for these requirements must register in their first semester for appropriate private or class instruction, with or without credit; students with insufficient background in voice must register for voice instruction no later than the third semester.

Specific requirements for the major: Lower division: Music 8A-8B, 10A-B-C-D may be omitted in part or in full upon evidence of satisfactory piano technique), 1A-51B, 58A-58B; four units selected from music courses numbered 70 to 87 (see ctivity requirements stated in general basic requirements for all music majors), 5A-15B, 20A-20B, 25A-25B, 30A-30B, and 35 (29-33 units). Upper division: Music 01A-101B, 108A-108B, 109A, 146A-B-C; four units chosen from Music 111, 112, 116, 117, 121, 122, 126, 127, 131, 132 or 150A-B-C-D; four units chosen from courses numbered 170 to 187 (see activity requirements stated in the general basic requirements for all music majors) (25 units). Nine units of music history courses may be counted toward general education requirements in Literature, Philosophy, and the Arts.

Professional courses in education consist of 22 upper division units to include the following courses: Education 184A-184B-184C, 116, 100B-Mu, and Health Education 151.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors for the special secondary credential listed above.

## SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (MEN)

The major in physical education consists of 42 units to include the following: Lower division: Physical Education 53, 63, 64, 72, Health Education 65 (11 units); and Physiology 1A and Zoology 8 (6 units). Upper division: Physical Education 141, 142, 145, 146, 151, 155, 168, 170A or 170B, 177, 190, and two units of physical education electives (25 units).

Professional courses in education consist of 24 upper division units to include the following courses: Education 184A-184B-184C, 116, 100B-PE, 100B in the minor field, and Health Education 151.

A teaching minor is required. Refer to the teaching minors for the special secondary credential listed above.

## SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (WOMEN)

The major in physical education consists of 38 units to include the following: Lower division: Physical Education 4, 5, 6, 12A-12B, 53, 72 (8 units); Physiology 1A or Zoology 20, and Zoology 8 (6 units). Pattern requirements for this credential also include the following courses: Physical Education 1A, 2A-2B, and 3A-3B. Upper division: Physical Education 155, 156A-156B, 160, 161, 164A-164B, 168, 170B, 185 and 190 (24 units).

Professional courses in education consist of 24 upper division units to include the following courses: Education 184A-184B-184C, 116, 100B-PE, 100B in the minor field, and Health Education 151.

A teaching minor is required. Refer to the teaching minors for the special secondary credential listed above.

## SPECIAL SECONDARY CREDENTIAL IN SPEECH ARTS

The major in speech arts consists of 45 units to include the following: Lower division: Speech Arts 4, 11A, 55A or 55B, 56A, 60A, 81 and three units in speech electives (21 units). Upper division: Speech Arts 150, 159, 176 or 179A; three units selected from 162, 191, or 192A; nine units selected from 108, 118, 140, 154A, 154B, 155, 182, or 183; and three units selected from upper division courses in English literature.

Professional courses in education consist of 22 upper division units to include the following courses: Education 184A-184B-184C, 116, 100B-SA, and Health Education 151.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors for the special secondary credential listed above.

## SPECIAL SECONDARY CREDENTIAL IN CORRECTION OF SPEECH DEFECTS

This credential is granted only to students who can verify two years of successful teaching experience or four semester hours of superior student teaching completed in an approved teacher education institution and who hold a valid California teacher's certificate, credential, or life diploma of elementary or secondary school grade. Such students must show credit in the following subjects:

| **Lower Division** | *Units* |
|---|---|
| Psychology 1, General | 3 |
| Speech Arts 4, Extemporaneous Speaking, or equivalent | 3 |
| Speech Arts 11A or 11B, Interpretation | 3 |
| Speech Arts electives | 6 |
| **Upper Division** | |
| Speech Arts 150, Phonetics | 3 |
| Speech Arts 221, Articulatory Problems of Speech or Education 176, Problems of Speech Correction and Articulation | 3 |
| Speech Arts 179A-179B or Education 179A-179B, Nervous Speech Disorders | 6 |
| Psychology 131, Foundations of Personality | 2 |
| One hundred supervised hours of teaching on elementary level in speech correction | 3 |

## SPECIAL SECONDARY CREDENTIAL FOR TEACHING THE MENTALLY RETARDED CHILD

An applicant for the special secondary credential for teaching the mentally retarded child must have completed the following minimum requirements:

1. Possession of a valid kindergarten-primary, general elementary, junior high school, or general secondary credential.

2. Completion of 18 semester hours of professional work selected from the following fields:

   a. Required group: Education 102B or 102C, 181, 182, Art 61A or 161A, and three units of directed teaching of the mentally retarded.

   b. Additional work to complete the required total of 18 semester hours selected from any of the following electives: Education 176, 144, Psychology 132, 150, or 151.

3. The 18-unit requirement will be reduced 4 units for each year of verified, successful experience in teaching special classes for mentally retarded children, the total not to exceed 12 units.

4. At least six semester units of the 18 required must have been completed within five years of the time application is made for the credential.

5. Twelve units of work must have been completed at this college.

## HEALTH AND DEVELOPMENT CREDENTIAL

This credential is offered for school nurses only.

Requirements for this credential include:

1. Possession of a valid license issued by the official California state board or agency in charge of his profession in California.

2. Two years of successful experience in the special service to be named in the credential, except for the school nurse.

3. For school nurse only: The completion of six semester hours of work, including courses in:

   A. Educational Psychology (Education 130)
   B. Administration of the School Health Program (Health Education 153)
   C. Social case work, or rural education or child hygiene.

Pattern to be approved by adviser appointed by the Chairman of Division of Education.

## SCHOOL PSYCHOLOGIST CREDENTIAL

Each applicant for recommendation for the school psychologist credential shall have completed the following minimum requirements:

1. Possession of a valid general elementary or general secondary credential.
2. One year of successful teaching experience.
3. Possession of a master's degree in psychology or educational psychology.
4. Each applicant must complete the following course requirements:

A. Child development, mental hygiene, and counseling and guidance, including interviewing:

| | *Units* |
|---|---|
| Education 102B, Child Growth and Development, or Psychology 106, Development Psychology | 3 |
| Psychology 132, Personality Adjustment | 2 |
| Psychology 152, Introduction to Methods of Counseling or Education 233, Guidance Counseling Techniques | 3 |

B. Psychology and education of exceptional children, social case practice including field work and clinical psychology:

| | |
|---|---|
| Education 181, Exceptional Children | 3 |
| Sociology 231, Field Work in Social Case Work | 3 |
| Psychology 151, Introduction to Clinical Appraisal or Psychology 211, Advanced Clinical Psychology | 3 |

C. Educational psychology and educational measurements including field work and elementary statistics:

| | |
|---|---|
| Psychology 130, Educational Psychology | 2 |
| Education 102A, Measurement and Evaluation in Elementary Education or Education 102D, Measurement and Evaluation in Secondary Education | 2 |
| Psychology 104A, Statistical Methods in Psychology | 3 |

D. Individual and group mental tests including field work:

| | |
|---|---|
| Psychology 105A, Introduction to Psychological Testing | 3 |
| Psychology 105B, Individual Mental Testing | 3 |
| Psychology 205, Advanced Mental Testing | 3 |

E. Remedial instruction including laboratory or classroom practice:

| | |
|---|---|
| Education 144, Diagnosis and Remedial Treatment of Difficulties in Reading | 3 |
| Education 176, Problems of Speech Correction and Articulation or Education, 179A, Nervous Speech Disorders | 3 |

These courses include laboratory practice.

## SCHOOL PSYCHOMETRIST CREDENTIAL

An applicant for the school psychometrist credential must have completed the following requirements:

1. Possession of a California general teaching credential (General Elementary, Junior High School, or General Secondary) or a four-year college course with a bachelor's degree.

2. Admission to teacher education by all undergraduate students or by graduate students who do not hold a California teaching credential. A special examining committee of members of both the Departments of Education and Psychology is established to interview applicants.

3. As a part of the undergraduate or graduate program the applicant must have completed 18 semester units of training distributed approximately as follows and approved by the credential adviser:

A. At least six units selected from the following areas with one course in each area: Education 102A or Education 102D or Education 184C; Education 102B or Education 102C; and Education 130 or Education 184B.

B. Six units as follows: Education 181 and Psychology 151.

C. Six units as follows: Psychology 105A and Psychology 105B.

# CURRICULA LEADING TO THE GENERAL SECONDARY SCHOOL CREDENTIAL

## INFORMATION CONCERNING THE GENERAL SECONDARY SCHOOL CREDENTIAL

A candidate for this credential must complete the requirements for the bachelor's degree from an accredited institution with a major and a minor commonly taught in the secondary schools of California. Admission to candidacy for this credential should be sought during the second semester of the sophomore year or immediately upon admission to San Diego State College with advanced or graduate status. For admission requirements, refer to the section entitled: Admission to Teacher Education.

Students desiring a major in art, business education, music, physical education or speech arts should complete the requirements for the special secondary credential in the respective area desired, then continue with the graduate program. For further details regarding these majors, refer to these credentials.

Students desiring one of the other areas as a major for which San Diego State College is authorized should complete a program leading to the A.B. degree at the end of four years and the General Secondary Credential upon completion of the graduate year requirements outlined on the following pages.

Any person desiring this credential should consult with the Coordinator of Secondary Education during his first semester of attendance at San Diego State College.

## RECOMMENDED PROGRAM FOR THE GENERAL SECONDARY SCHOOL CREDENTIAL

1. The following courses should be completed before receiving the bachelor's degree: Health Education 151 (may be taken any semester); Education 184A and 184B (should be taken consecutively). Those persons changing from another vocational objective to education during the senior year may take Education 184A and 184B concurrently by special permission of the Coordinator of Secondary Education, following admission to Teacher Education and a check of the student's qualifications.

| | *Units* |
|---|---|
| Health Education 151, Health Education for Teachers | 2 |
| Education 184A, The Secondary School | 4 |
| Education 184B, Development and Learning | 4 |

2. After completion of requirements in (1) above, the following courses may be taken either before or after receiving the bachelor's degree; however, they should be taken concurrently with the first directed teaching assignment unless the student has equivalent teaching experience.

| | *Units* |
|---|---|
| Education 184C, The Teaching Process | 4 |
| Education 100B (methods in major or minor field) | 2 |
| Education 116 or 316, Directed Teaching (or equivalent) | 3 |

3. The graduate work must consist of San Diego State College's standard year of work, 24 to 30 semester units of upper division or graduate work, including the following specific requirements:

(a) At least 12-15 semester units must be completed at San Diego State College.

(b) At least one course of graduate level work (200 number) in the major field. Most departments require two courses.

(c) At least six upper division or graduate semester units in fields outside of education.

(d) Enough units to complete at least a 21 semester unit minor, with a minimum of six semester units of upper division credit in the minor subject area.

For a statement of requirements in the teaching major and minor fields, refer to these majors and minors below.

4. Professional Education during the graduate year: Completion of the courses listed in (1) and (2) above and the following:

| | *Units* |
|---|---|
| Education 100B in the major or minor field if not taken under (2) above | 2 |
| Education 230, Guidance Problems in Secondary Education | 3 |
| Education 250, Curricular Problems in Secondary Education | 3 |
| Education 316, Directed Teaching in both major and minor fields, or equivalent teaching experience | 3–6 |

## MAJORS AND MINORS FOR THE GENERAL SECONDARY CREDENTIAL

The following pages outline tentative programs for the majors and minors for which San Diego State College is authorized to recommend for the General Secondary Credential. Every candidate for the general secondary credential must have a program approved in writing by the departmental representative in the major teaching field and in education as part of admission to the teacher education program.

*Teaching Majors*

Art
Business Education
English
French
Health Education
Life Science and General Science
Mathematics
Music
Physical Education (Men)
Physical Education (Women)
Physical Science and General Science
Psychology
Romance Languages
Social Studies
Spanish
Speech Arts

*Teaching Minors*

Art
Business Education
Economics
English
French
Health Education
History
Home Economics
Industrial Arts
Life Science and General Science
Mathematics
Music
Physical Education (Men)
Physical Education (Women)
Physical Science and General Science
Recreation
Spanish
Speech Arts

### Outline of Requirements

### Major in Art

The requirements for the A.B. degree and the special secondary credential in art should be completed simultaneously. (Students transferring from another institution with the A.B. degree and a major in art should consult with the departmental representative for special program planning.) Refer to the special secondary credential in art. After the above requirements have been met, and the candidate has been accepted by the art staff for graduate work in art, the candidate for the general secondary credential shall complete a graduate year including the following courses in his major:

| *Graduate Year* | *Units* |
|---|---|
| Art 200A-200B, Special Problems in Art | 4 |

### Minor in Art

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Art A-B, Drawing and Composition | 2–4 |
| Art 6A-6B, Design | 4 |
| Art elective (Art 14A, Lettering, recommended) | 3–5 |
| Aesthetics 50, Appreciation and History of Art | 2 |
| Aesthetics 5, Art Orientation, or Art 51, Survey of Mexican Art | 2 |
| *Upper Division* | |
| Aesthetics 150, Appreciation and History of Art | 2 |
| Art electives | 4 |

### Major in Business Education

The requirements for the A.B. degree and the special secondary credential in Business Education must be completed simultaneously. Refer to the special secondary credential in Business Education. After the above requirements have been met, the candidate for the general secondary credential shall complete a graduate year including the following courses in his major:

| *Graduate Year* | *Units* |
|---|---|
| Select four units from the following: | |
| Business 203, Office Management | 2 |
| Business 213, Problems in Business Education | 2 |
| Business 223, Problems of Distributive Business | 2 |
| Business 233, Administration and Supervision of Business Education | 2 |
| Business 260, Advanced Problem Analysis (Accounting) | 2 |

### Minor in Business Education

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Business 1A-1B, Typewriting | 6 |
| Business 14A-14B, Principles of Accounting | 6 |
| *Upper Division* | |
| Nine upper division units should be selected in consultation with adviser in business education | 9 |

### Minor in Economics

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Economics 1A-1B, Principles of Economics | 6 |
| A year course in another social science area | 6 |
| *Upper Division* | |
| Economics 100A, Intermediate Economic Thought | 3 |
| Economics electives | 6 |

### Major in English

| | |
|---|---|
| *Lower Division* | |
| One year-course from lower division English electives | 6 |
| Lower division English electives | 6 |
| *Upper Division* | |
| Upper Division English courses selected under the supervision of the departmental representative | 24 |
| *Graduate Year* | |
| One of the graduate seminars | 2 |
| English 192, The English Language (if not taken as an undergraduate) or 191, 195, or an additional seminar | 2–3 |

### Minor in English

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| English 1 or 41, Composition | 3 |
| English electives | 6 |
| *Upper Division* | |
| English electives (student should consult with departmental adviser) | 12 |

### Major in French

| | |
|---|---|
| *Lower Division* | |
| French 1, 2, 3, 4, 5, 6, or equivalents | 16 |
| Spanish 1, 2, or German 1, 2, or Latin 1, 2, or their equivalents | 6 |
| History 4A-4B (recommended) | |

*Upper Division*

| | Units |
|---|---|
| French 101A-101B, Conversation and Composition | 6 |
| French 199, Comprehensive Reading and Survey | 3 |
| Upper division courses in French with a maximum of six units which may be selected from related fields with the approval of the departmental representative | 15 |

*Graduate Year*

| | |
|---|---|
| French 214, Contemporary French Literature | 2 |
| French 220, Explication de Textes | 2 |

### Minor in French

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| French 1, 2, 3, 4, 5, 6, or equivalents | 16 |
| History 4A-4B (recommended) | |

*Upper Division*

| | |
|---|---|
| French 101A-101B, Conversation and Composition | 6 |

### Major in Health Education

This teaching major may be used as a major for the A.B. degree if the student has been admitted to candidacy for the general secondary credential and has completed at least eight units in professional education courses, including Education 184A-184B, by the date of degree candidacy. The major is designed around the general major, with health education as the field of concentration.

*Lower Division*

| | |
|---|---|
| Health Education 65, Community Health | 3 |
| Health Education 90, Physiology of Reproduction | 1 |
| Home Economics 61A, Nutrition | 2 |
| Physiology 1A, Human Physiology | 3 |
| Zoology 8, Human Anatomy | 3 |

*Upper Division*

36 upper division units to include the following:

| | |
|---|---|
| Health Education 145, Safety Education and Accident Prevention | 3 |
| Health Education 151, Health Education for Teachers | 2 |
| Health Education 152, Health Education Programs | 3 |
| Health Education 153, Administration of the School Health Program | 3 |
| Health Education 199, Special Study in Health Education | 3–6 |
| Physical Education 151, Instructor's Course in First Aid | 2 |
| Sociology 135, Marriage and the Family | 3 |
| Psychology 131, Foundations of Personality | 2 |
| Psychology 132, Personality Adjustment | 2 |
| Bacteriology 101, General Bacteriology | 4 |
| Six to nine upper division units selected from one of the teaching major or minor fields for the general secondary credential, selected with approval of the departmental adviser | 6–9 |

### Minor in Health Education

A minimum of 21 semester units required.

Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

*Lower Division*

| | |
|---|---|
| Health Education 21, Principles of Healthful Living | 2 |
| Health Education 65, Community Health | 3 |
| Health Education 90, Physiology of Reproduction | 1 |

*Upper Division*

| | |
|---|---|
| Health Education 145, Safety Education and Accident Prevention | 3 |
| Health Education 151, Health Education for Teachers | 2 |
| Health Education 152, Health Education Programs | 3 |
| Health Education 153, Administration of School Health Program | 3 |
| Health Education 199, Special Study in Health | 2–3 |
| Physical Education 151, Instructor's Course in First Aid | 2 |

### Minor in History

A minimum of 21 semester units required. A year course in United States History must be included.

| *Lower Division* | *Units* |
|---|---|
| History 4A-4B, Modern Europe, or 8A-8B, The Americas, or 9A-9B, Pacific Ocean Area, or 17A-17B, American Civilization | 6 |
| Electives chosen from anthropology, economics, geography (except Geography 1 or 3), political science, sociology | 6 |
| Additional social science electives | 0–3 |
| *Upper Division* | |
| History electives | 6–9 |

### Minor in Home Economics

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Home Economics 5, Foods | 3 |
| Home Economics 10, Clothing Fundamentals, or 11, Advanced Clothing | 3 |
| Electives in Home Economics | 3–6 |
| *Upper Division* | |
| Home Economics 105, Family Meals | 3 |
| Home Economics 150, Home Management | 3 |
| Home Economics 170, Child Care and Development | 3 |
| Electives in Home Economics | 3–6 |
| Electives for enrichment—see department chairman. | |

### Minor in Industrial Arts

A minimum of 21 semester units required.

| | | |
|---|---|---|
| *Lower Division* | | |
| Industrial Arts 2, Mechanical Drawing | | 3 |
| Select at least three courses from the following: | | 9 |
| Industrial Arts 31, Elements of Metalwork | 3 | |
| Industrial Arts 51, Elements of Woodwork | 3 | |
| Industrial Arts 61, Elements of Electricity | 3 | |
| Industrial Arts 71, Elements of Transportation Machinery | 3 | |
| *Upper Division* | | |
| Industrial Arts 121, Advanced Mechanical Drawing | | 3 |
| Select appropriate upper division electives | | 6 |

### Major in Life Science and General Science

| | |
|---|---|
| *Lower Division* | |
| Zoology 1A-1B, General | 8 |
| Botany 2A-2B, General, or 1, Introduction | 4–8 |
| Zoology 20, Human Anatomy and Physiology, or Physiology 1C, Human Physiology | 2–3 |
| Chemistry 2A-2B | 6 |
| Physics 2A-2B | 6 |
| Geology 2, General, Astronomy 1, Descriptive, and Physics 3A-3B, Physical Measurements, recommended. | |
| *Upper Division* | |
| Zoology 119, Field Zoology | 4 |
| Botany 114, Plant Taxonomy, or Botany 119, Field Botany | 3–4 |
| Bacteriology 101, General Bacteriology | 4 |
| Botany 155, Genetics, or Zoology 165, Human Heredity | 2 |
| Zoology 160, Evolution | 2 |
| Zoology 150, Readings in Biology | 2 |
| Two courses chosen from the following: | |
| Zoology 110, 112, 113, 115, 118, 121 | 7–8 |
| Twelve units in natural science courses may be counted as general education toward the natural science requirement. | |

| *Graduate Year* | *Units* |
|---|---|
| Zoology 200, Seminar | 3 |
| Zoology 202, Hydrobiology, or Zoology 213, Advanced Studies in Ornithology | 2 |

## Minor in Life Science and General Science

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Biology 3, Principles, and Biology 4, Plant and Animal Types | 6 |
| Physical Science 1 and 2, Introduction | 6 |
| Physiology 1C, Human Physiology | 2 |
| *Upper Division* | |
| Botany 114, Plant Taxonomy, Botany 119, Field Botany, or Zoology 119, Field Zoology | 3–4 |
| Botany 150, Readings in Biology | 2 |
| Zoology 160, Evolution | 2 |

## Major in Mathematics

| | |
|---|---|
| Mathematics 3A, Analytic Geometry | 3 |
| Mathematics 3B, First Course in Calculus | 3 |
| Mathematics 4A, Second Course in Calculus | 3 |
| Additional mathematics or work in related areas | 3 |

***Suggested courses in related areas:*** Astronomy 1, Descriptive Astronomy; Business 2, Mathematics of Finance; Engineering 1A, Plane Surveying; Engineering 21, Descriptive Geometry; Physics 4A, Mechanics of Solids and Fluids; Physics 2A, General.

| | |
|---|---|
| ***Upper Division*** | |
| At least one course in Algebra | 3 |
| At least one course in Geometry | 3 |
| Mathematics 140A, Mathematical Statistics | 3 |
| Mathematics 117, Intermediate Calculus (unless 4B, Third Course in Calculus taken in lower division) | 3 |
| Mathematics 104, History of Mathematics | 3 |
| Additional upper division units in mathematics or related areas | 9 |
| *Graduate Year* | |
| Four units selected from the following: | |
| Mathematics 201, Concepts of Geometry from an Advanced Point of View | 2 |
| Mathematics 202, Concepts of Algebra from an Advanced Point of View | 2 |
| Mathematics 204, Advanced Work in the History of Mathematics | 2 |
| Mathematics 224, Functions of a Complex Variable | 3 |

## Minor in Mathematics

A minimum of 21 semester units required.

| | |
|---|---|
| ***Lower Division*** | |
| Mathematics D, Trigonometry (or high school equivalent for which pattern credit may be allowed) | 3 |
| Mathematics 3A, Analytic Geometry | 3 |
| Mathematics 3B, First Course in Calculus | 3 |
| One course selected from courses in related areas (See above under teaching major in mathematics) | 3 |
| *Upper Division* | |
| Mathematics 104, History of Mathematics | 3 |
| Mathematics electives | 6 |

## Major in Music

The requirements for the A.B. degree and the special secondary credential in music should be completed simultaneously. Students transferring from another institution with the A.B. degree and a major in music should consult with the departmental representative for special program planning. Refer to the special secondary credential in music. After the above requirements have been met, the candidate for the general secondary credential shall complete a graduate year including 4 units selected from the following courses in his major:

*Graduate Year*

Four units selected from the following:

| | *Units* |
|---|---|
| Music 200A-200B, Special Problems in Music | 2–2 |
| Music 203, Musicology | 2 |
| Music 206, Composition | 2 |

### Minor in Music

A minimum of 21 semester units required. The student is required to demonstrate vocal or instrumental proficiency before admission to the minor program may be granted. As laboratory experience, the student with music as a minor is required to participate in one music activity each semester (in special cases this requirement may be waived by the Chairman of the Music Department). A maximum of four units of credit from music activities may be used toward the total graduation requirement.

*Lower Division*

| | |
|---|---|
| Music 8A-8B, Fundamentals, and Harmony | 6 |
| Music 10A-10B, Piano (may be omitted in part or in full upon demonstration of proficiency) | 2 |
| Music activities chosen from courses numbered 70 to 87 | 2 |
| Selected from the following: Music 15A, 20A, 25A, 30A | 3–5 |

*Upper Division*

| | |
|---|---|
| Music 101A, History of Music | 3 |
| Music 146A, Fundamentals of Conducting | 1 |
| Music 146B, Instrumental Conducting, or 146C, Choral Conducting | 1 |
| Music activities chosen from courses numbered 170 to 187 | 2 |
| Selected from the following: Music 111, 112, 116, 117, 121, 122, 126, 127, 131, 132, or 150 | 1 |

### Major in Physical Education for Men

The requirements for the A.B. degree and the special secondary credential in physical education must be completed simultaneously. Refer to special secondary credential in physical education. After the above requirements have been met, the candidate for the general secondary credential shall complete a graduate year including the following courses in his major:

Select two courses from the following:

| | |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |
| Physical Education 298, Special Study | 2 |

### Minor in Physical Education for Men

A minimum of 21 semester units required.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

*Lower Division*

| | |
|---|---|
| Physical Education 53, Physical Education in the Elementary Schools | 2 |
| Physical Education 72, Introduction | 2 |
| Electives | 2–4 |

*Upper Division*

| | |
|---|---|
| Professional activity courses (should be selected in consultation with departmental representative) | 4 |
| Physical Education 151, Instructor's Course in First Aid | 2 |
| Physical Education 190, Administration of Physical Education in Secondary Schools | 3 |
| Physical Education 170A or 170B Recreational Leadership | 2 |
| Electives | 2–4 |

## Major in Physical Education for Women

The requirements for the A.B. degree and the special secondary credential in physical education must be completed simultaneously. Refer to the special secondary credential in physical education. After the above requirements have been met, the candidate for the general secondary credential shall complete graduate year including the following courses in his major:

Select two courses from the following:

| | Units |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education, and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |
| Physical Education 298, Special Study | 2 |

## Minor in Physical Education for Women

A minimum of 21 semester units required.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

*Lower Division*

| | |
|---|---|
| Physical Education 1A, Fundamental Skills | ½ |
| Physical Education 2A, Folk Dancing | ½ |
| Physical Education 3A, Modern Dance | ½ |
| Physical Education 4, 5, 6, Team Sports | 1½ |
| Physical Education 53, Physical Education in Elementary Schools | 2½ |
| Physical Education electives | 3½–4½ |

*Upper Division*

| | |
|---|---|
| Physical Education 156A-156B, Sports Methods | 4 |
| Physical Education 161, Folk Dancing Materials and Advanced Techniques | 2 |
| Electives selected from Physical Education 190, 170B, 164A-164B | 5–6 |

## Major in Physical Science and General Science

To obtain a teaching major in physical science and general science for the general secondary credential a student obtaining the A.B. degree in chemistry, physics, or physical science should include in his program the following courses, which will also satisfy the natural science requirements for general education:

*Lower Division*

| | |
|---|---|
| Astronomy 1, Descriptive | 3 |
| Biology 3 and 4, General, and Plant and Animal Life | 6 |
| Geology 2 or 1A, General or Physical | 3–4 |

Recommended electives: Astronomy 9, Geography 3, Geology 3; general education courses in literature, philosophy, and the arts: Physical Science 10, Industrial Arts 5 and/or 6.

*Upper Division*

Recommended electives: Botany 119, Chemistry 101, Physics 107, Physics 158, Zoology 119; general education course in social science: Geography 145.

*Graduate Year*

Select four units from the following:

| | |
|---|---|
| Chemistry 200, Seminar | 2–4 |
| Physics 200, Seminar | 2–4 |

## Minor in Physical Science and General Science

This minor consists of 26 units in courses specified below.

| | |
|---|---|
| Astronomy 1, Descriptive Astronomy | 3 |
| Biology 3 and 4, Principles, and Plant and Animal Types | 6 |
| Chemistry 2A-2B, or 1A-1B, Fundamentals, or General | 6–10 |
| Geology 2 or 1A, General, or Physical | 3–4 |
| Physics 2A-2B and 3A-3B, or 4A-4B-4C, General, or Principles | 8–12 |

The following courses are recommended as electives: Astronomy 9, Geology 3, Chemistry 101, Geography 3, Geography 145, Physics 148, Botany 119, or Zoology 119, Physical Science 10, Industrial Arts 5 and 6.

### Major in Psychology

This major can be used for a general secondary credential only if the candidate completes *two* teaching minors.

| *Lower Division* | *Units* |
|---|---|
| Psychology 5 and 6, Principles | 6 |
| *Upper Division* | |
| Psychology 104A, Statistical Methods | 3 |
| Psychology 105B, Individual Mental Testing | 3 |
| Psychology 131, Foundations of Personality | 2 |
| Psychology 132, Personality Adjustment | 2 |
| Psychology 151, Introduction to Clinical Appraisal | 3 |
| Psychology 160A, Experimental Psychology | 3 |
| Electives to be selected with approval of the departmental representative | 8 |
| *Graduate Year* | |
| Psychology 201, Seminar in Psychology | 2 |
| Education 230, Guidance Problems in Secondary Education | 3 |

### Minor in Recreation

A minimum of 21 semester units required.

Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| *Lower Division* | |
|---|---|
| Physical Education activities | 2 |
| Physical Education 53, Physical Education in Elementary Schools | 2 |
| Electives selected from Art 61B, Crafts, or from the fields of dance, drama or music | 2–4 |
| *Upper Division* | |
| Physical Education 151, Instructor's Course in First Aid | 2 |
| Recreation 165, Administration of Community Recreation | 3 |
| Recreation 170A-170B, Recreational Leadership | 2–4 |
| Recreation 184A-184B, Field Work in Recreation | 3–6 |
| Recreation 199, Special Study in Recreation | 1–6 |

### Major in Romance Languages

| *Lower Division* | |
|---|---|
| Spanish 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| French 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| History 4A-4B, or 8A-8B (recommended) | |
| *Upper Division* | |
| Spanish 101A-101B, Conversation and Composition | 6 |
| French 101A-101B, Conversation and Composition | 6 |
| Spanish 199 or French 199, Comprehensive Reading and Survey Course | 3 |
| Courses in Spanish literature, French literature or Spanish-American literature, selected with the approval of the departmental representative | 9 |

NOTE: At least nine units of upper division courses must be taken in each language.

*Graduate Year*

Any two of the following courses:

| | |
|---|---|
| French 214, Contemporary French Literature | 2 |
| French 220, Explication de Textes | 2 |
| Spanish 201, Old Spanish | 2 |
| Spanish 204, Seminar in Spanish-American Literature | 2 |

### Major in Social Science

This teaching major may be used as a major for the A.B. degree if the lower and upper division requirements listed below are completed and the student has been admitted to candidacy for the general secondary credential and has completed at least eight units of professional courses in education by the date of degree candidacy. Twelve units of social science courses in the major may be counted toward general education requirements in social science.

The major must include six units in United States history and work from at least four of the social science fields listed below.

*Lower Division*

A student must complete a minimum of six units in each of at least three fields he may select from the departments named below:

Economics
Geography
History
Political Science
Sociology and/or Anthropology

*Upper Division*

A student must complete a minimum of 30 units with the approval of the departmental representative as follows:

| | *Units* |
|---|---|
| 1. A minimum of 12 units from any field named above | 12 |
| 2. A minimum of six units from each of two fields named above, excluding the field selected for the major upper division concentration | 12 |
| 3. Electives from social science fields | 6 |

*Graduate Year*

| | |
|---|---|
| Post-bachelor work selected with approval of the departmental representative | 4 |

**Major in Spanish**

*Lower Division*

| | |
|---|---|
| Spanish 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| French 1, 2, or German 1, 2, or Latin 1, 2, or their equivalents | 6 |
| History 4A-4B, or 8A-8B (recommended) | |

*Upper Division*

| | |
|---|---|
| Spanish 101A-101B, Conversation and Composition | 6 |
| Spanish 199, Comprehensive Reading and Survey | 3 |
| Upper division courses in Spanish with a maximum of six units which may be selected from related fields with the approval of the departmental representative | 9–15 |

*Graduate Year*

| | |
|---|---|
| Spanish 201, Old Spanish | 2 |
| Spanish 204, Seminar in Spanish-American Literature | 2 |

**Minor in Spanish**

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| Spanish 1, 2, 3, 4, 5, 6, or equivalents | 16 |
| History 4A-4B, or 8A-8B (recommended) | |

*Upper Division*

| | |
|---|---|
| Spanish 101A-101B, Conversation and Composition | 6 |

**Major in Speech Arts**

The requirements for the A.B. degree and the special secondary credential in Speech Arts must be completed simultaneously. Refer to the special secondary credential in Speech Arts. After the above requirements have been met, the candidate for the general secondary credential shall complete a graduate year including the following courses in his major:

*Graduate Year*

Select four units from the following courses:

| | |
|---|---|
| Speech Arts 260, Seminar in Oral Interpretation | 2 |
| Speech Arts 221, Seminar in Articulatory Problems in Speech | 2 |
| Speech Arts 245, Seminar in Technical Practice | 2 |
| Speech Arts 259, Seminar in Stage Direction | 2 |
| Speech Arts 200, Seminar in History or Oratory | 2 |

**Minor in Speech Arts**

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| Speech Arts 3, Speech for Communication | 2 |
| Speech Arts 4, Oral Communication | 3 |
| Speech Arts 11A-11B, Interpretation | 6 |
| Speech Arts 82, Radio Announcing | 3 |
| Electives in speech from 61 or 63 | 0–1 |

*Upper Division*

| | |
|---|---|
| Speech electives (should be selected in consultation with departmental representative) | 6–7 |

# CURRICULA LEADING TO CREDENTIALS IN ADMINISTRATION AND SUPERVISION

## CURRICULA LEADING TO CREDENTIALS IN ELEMENTARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the general requirements of the State of California for all degrees, the candidate shall meet the following requirements:

(a) Possess a valid general elementary credential.
(b) Present written evidence of two years of successful teaching experience in the elementary schools.
(c) Complete 30 semester units for the administration credential (24 units for the supervision credential) of upper division or graduate work in addition to the holding of the general elementary credential. These units shall include specific courses designated by the State Department of Education and the college.
(d) Maintain a grade point average of 1.75 in work taken subsequent to receipt of the general elementary credential.
(e) Complete a minimum of 15 units of work in residence at San Diego State College.
(f) Make formal application to the Coordinator of Elementary Education.
(g) Earn the recommendation of the Division of Education.

Students applying for the elementary administration or supervision credentials should register with the office of the Chairman of the Division of Education and confer with the Coordinator of Elementary Education concerning the courses which may be offered in satisfaction of the requirements. Outlines of pattern requirements for either the elementary supervision or administration credentials may be obtained by writing the Coordinator of Elementary Education.

## SPECIAL SUBJECT SUPERVISION CREDENTIAL

This credential is available for persons who wish to supervise in a special subject area. Those desiring this credential should see the Chairman of the Division of Education.

## CURRICULA LEADING TO CREDENTIALS IN SECONDARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the general requirements of the State of California for all degrees, the candidate shall meet the following requirements:

(a) Possess a valid general secondary credential.
(b) Present written evidence of two years of successful teaching experience.
(c) Complete 18 semester units for the administration credential (15 semester units for the supervision credential) of upper division or graduate work after holding a valid general secondary credential. These units must include a specific pattern of courses designated by the State Department of Education and the college.
(d) Maintain a grade point average of 1.75 on units under (c).
(e) Complete a minimum of 12 units of work in residence at San Diego State College after holding the general secondary credential.
(f) Make formal application to the Coordinator of Secondary Education.
(g) Earn the recommendation of the Division of Education.

Students applying for the secondary administration or supervision credentials should register with the office of the Chairman of the Division of Education and confer with the Coordinator of Secondary Education concerning the courses which may be offered in satisfaction of the requirements. Outlines of pattern requirements for either the secondary supervision or administration credentials may be obtained by writing the Director of Secondary Education.

# THE BACHELOR OF EDUCATION DEGREE AND THE GENERAL ELEMENTARY CREDENTIAL

## ELIGIBILITY FOR CANDIDACY

Teachers in California public schools with a minimum of 60 semester units of standard college work are eligible for candidacy for the Bachelor of Education degree. The purpose of this degree is to increase the professional competence of teachers in California public schools who do not hold a bachelor's degree. The educational program of each applicant shall be determined on the basis of his previous preparation and of the services he is to render. In the period of professional preparation the applicant shall be guided into those learning experiences designed to meet his cultural and professional needs.

## MINIMUM REQUIREMENTS

An applicant for the general elementary credential and the Bachelor of Education degree shall comply with the procedures for application and with the requirements for personal qualifications and general training and shall have completed a program including the following minimum requirements:

a. A four-year college course of 124 semester units, or the equivalent.

b. Eighteen semester units, or the equivalent, of professional work in education, constituting an organized program designed to prepare candidates in the following areas:

   (1) The evolution of educational thought and practice as to the function of the school in a democratic society, with emphasis on the elementary school.

   (2) The nature of individual growth and development; the psychological aspects of learning; child study, with emphasis on directed observation of children; mental hygiene and personality development; parent education; guidance practices.

   (3) The selection and arrangement of learning experiences, instructional materials, learning methods and appraisal techniques related to all statutory requirements for teaching, including reading, writing, spelling, language study, arithmetic, geography, history of the United States and of California, civics including the Constitution of the United States, music, art, physical education, healthful living, morals and manners, safety education, and fire prevention.

   (4) The use of audio-visual aids in instruction.

c. Directed teaching in the elementary school, eight semester units, or the equivalent, under the supervision of superior teachers in actual classroom situations of the elementary school level.

d. Sixty-one semester units or the equivalent in basic subject fields, distributed approximately as follows:

   (1) *Social Studies.* Twelve semester units, or the equivalent, with emphasis upon current economic, political, and social problems and world history and geography, sociology and anthropology. The legal requirement in United States Constitution and American history, institutions, and ideals shall be included in the social studies program.

   (2) *Science.* Twelve semester units, or the equivalent, in the fields of physical and biological science, with emphasis upon the study and use of the environment.

(3) *English*, including speech. Twelve semester units, or the equivalent, including oral and written expression, world literature, children's literature, dramatics, detection and correction of speech defects, and the use of books and libraries.

(4) *Mathematics.* Three semester units, or the equivalent, including subject matter and techniques essential in the teaching of mathematics in the elementary school.

(5) *Health and Hygiene.* Three semester units, or the equivalent, including personal hygiene, subject matter and techniques essential in health education to elementary school pupils.

(6) *Physical Education.* Three semester units, or the equivalent, including subject matter and techniques essential in the teaching of physical education to elementary school pupils.

(7) *Music.* Eight semester units, or the equivalent, including content and techniques appropriate for the elementary school.

(8) *Art.* Eight semester units, or the equivalent, in graphic art and industrial arts applicable to learning experiences appropriate for elementary school children.

e. The remaining units necessary to complete the requirements for the Bachelor of Education degree shall be distributed among those offerings of the institution that best serve the cultural and professional needs of the candidate, except that a course or the equivalent in fire prevention must be included.

## EVALUATION OF TEACHING EXPERIENCE AND SUBJECT MATTER FIELDS

a. A candidate with two or more years' teaching experience may be awarded a maximum of 8 semester units of credit, or the equivalent, in directed teaching provided he demonstrates satisfactory skill to a representative of the institution under whose direction he is completing his degree program, or provided other conditions set by the institution to insure classroom skill are met. This credit shall not be applied until the candidate has completed at least 112 semester units, or the equivalent, of his program.

b. Credit toward the B. Ed. degree may be secured by passing comprehensive examinations in the fields of study mentioned in paragraphs (b) and (d) above.

## INSTITUTION AND RESIDENCE REQUIREMENTS

a. A minimum of 30 semester units, or the equivalent, must be secured from the college conferring the degree.

b. A least 12 semester units, or the equivalent, must be earned in campus residence course work at the college conferring the degree and must be secured after completion of at least 90 semester units, or the equivalent.

c. A maximum of 30 units may be secured by examination.

# PREPROFESSIONAL AND VOCATIONAL CURRICULA

Preprofessional and vocational curricula, ranging in length from two to four years of collegiate work, are offered. Curricular outlines of preprofessional study, which are presented on the following pages, meet the typical requirements for admission to professional schools. Students expecting to complete their professional training at other institutions should modify the suggested outlines of study to meet the requirements of the professional schools of their choice. Curricular outlines for complete training leading to vocations are also presented on the following pages.

Curricular outlines are presented for the following:

Preagricultural
Business
Predental
Engineering
Home Arts
Inter-American Relations
Journalism
Laboratory Technique
Prelegal
Life Science Vocational
Premedical
Personnel Management
Prepharmacy
Public Administration
Recreation
Presocial Work

Students planning to enter professional or vocational occupations in forestry, nursing, optometry, or veterinary science may obtain assistance from advisers in these areas in planning lower division courses leading to further education in these fields.

## PREAGRICULTURAL CURRICULA

These curricula are provided for students who plan to enter the field of agriculture to enable them to obtain basic science and general education courses before transferring to an agricultural institution. These students should ascertain the lower division requirements of the college to which they expect to transfer and include such requirements in the plan suggested below.

Students in high school preparing to study agriculture should include the following subjects: Elementary algebra, plane geometry, intermediate algebra, trigonometry, chemistry, physics, mechanical drawing, and three years of one foreign language, if required by the college to which the student expects to transfer.

*Curriculum in Plant Science:* Freshman year, physical education activities, Health Education 21, Chemistry 1A-1B, Botany 2A-2B, Physics 2A-2B, English 1, and Speech Arts 3 (32 units) ; sophomore years, physical education activities, Economics 1A-1B, English 2A or other literature course, Chemistry 101 and 102, Geology 1A or 2A, Bacteriology 1, Zoology 1A and Psychology 1 (32 units).

*Curriculum in Animal Science:* Freshman year, physical education activities, Chemistry 1A-1B, Zoology 1A-1B, Physics 2A-2B, English 1, Speech Arts 3, Health Education 21 (32 units) ; sophomore year, physical education activities, Psychology 1, English 2A or other literature course, Economics 1A-1B, Bacteriology 1, Botany 1, Chemistry 101 and 102, Zoology 20 or 8, and 100 (34 units).

Students should consult with the adviser in the preagricultural curriculum for selection and arrangement of courses.

## BUSINESS CURRICULA

The Division of Business consists of three departments: Accounting and Business Management; Marketing; and Business Education, Secretarial and Office Management. Each department offers a major in business with fields of specialization within the department.

The Department of Accounting and Business Management offers specialization in accounting, banking and finance, business management, insurance, and credit management. The Marketing Department offers specialization in marketing and in personnel management. The Business Education, Secretarial and Office Management Department offers specialization in secretarial and office management and in teacher education leading to the special secondary and general secondary school credentials.

The first two years of the business curricula are introductory. During this period the student acquires a basis for further study and an understanding of the place that business fills in modern economic life. There are some differences in the lower division requirements in the various fields of specialization. A selection of the field of specialization should be made as early as possible by the student. A student may transfer from one field of specialization to another, but with possible loss in time because of the differences in requirements among the various fields. The student follows a program of studies that is designed to provide a vocational ability in at least one area.

Refer to the departments in the Division of Business for specific requirements in the business major with fields of specialization. Students should consult with the departmental adviser in selection and arrangement of courses.

## PREDENTAL CURRICULUM

Candidates for a degree in dentistry should ascertain the entrance requirements of the dental college to which they expect to transfer and should make whatever changes in the following typical requirements that may seem desirable in satisfying the requirements of the specific dental college.

The curriculum for dental hygiene is essentially the same as for predentistry.

High school students planning to enter dentistry should include in the high school program the following subjects: Elementary algebra, plane geometry, intermediate algebra, chemistry, physics, mechanical drawing, and three units in one foreign language if required by the college to which a student expects to transfer.

*Course of Study for Predental Curriculum:* Freshman year, physical education activities, Health Education 21, Psychology 1, Speech Arts 3, English 1, English 2A or other literature course, Chemistry 1A-1B, Physics 2A-2B and 3A-3B (32 units); sophomore year, physical education activities, Chemistry 5A, Zoology 1A-1B, Mathematics C and D, social science including courses in U. S. history and Constitution, and electives in general education (32 units).

The following courses for a third year in preparation for dentistry are suggested for students who fail to receive acceptance from a dental college after complet-ng the prescribed 60 units: Chemistry 101 and 102; Zoology 100 and 106; Art 119A, Psychology 11; additional courses in general education.

## ENGINEERING CURRICULA

The engineering program is designed to give a student a sound training in the undamentals of general engineering with a minimum of specialization, and at the same ime provide the broad training and experiences which constitute a liberal education. The program leads to the degree of Bachelor of Science in Engineering.

Students graduating in engineering will find employment in various functions of heir chosen field. For example, a student who has selected the mechanical engineering ption may find employment in the operation of a steam plant, or in the application and ales of construction equipment.

The program is intended to provide the essential training in those functions which re within the scope of a four year program. These, specifically, are the production, peration, maintenance, service, sales, and management functions of engineering. Curicula and individual courses are designed to emphasize these functions. Students who esire training for work in such fields as research, design, and development should plan o complete their education at a University.

### FIELDS OF SPECIALIZATION

In the freshman and sophomore years all students are expected to take the courses isted below. In the junior and senior years optional programs are available which provide limited specialization in aeronautical, chemical, civil, electrical, electronic and mechanical engineering, and in engineering economics. Normally, students are expected o elect one of these basic options. In certain cases equivalent programs may be worked out which will better suit the needs of an individual student.

## HIGH SCHOOL PREPARATION

The high school program should include the following subjects: Elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; solid geometry, ½ unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit.

## GENERAL REQUIREMENTS

Courses must be included to satisfy all requirements for the B.S. degree. See section of the bulletin entitled: Bachelor of Science Degree in Arts and Sciences. The curricula given below specify the requirements for the indicated options and include recommended electives to fulfill the requirements for general education. General education courses are prefixed with a *.

### Lower Division Requirements for All Engineering Students

| Freshman Year | *Units* 1st Sem. | 2d Sem. |
|---|---|---|
| * P.E. activities | ½ | ½ |
| Math. 3A-3B | 3 | 3 |
| Physics 4A | – | 4 |
| Chem. 1A-1B | 5 | 5 |
| * English 1 | 3 | – |
| * Speech Arts 3 | 2 | – |
| * Biology 1 | – | 3 |
| * Psychology 1 | 3 | – |
| | 16½ | 15½ |

| Sophomore Year | *Units* 1st Sem. | 2d Sem |
|---|---|---|
| * P.E. activities | ½ | [illegible] |
| Math. 4A-4B | 3 | 3 |
| Physics 4B-4C | 4 | 4 |
| * Econ. 1A-1B | 3 | 3 |
| Engr. 21 and 23 | 3 | 2 |
| Restricted electives | 3 | 3–4 |
| Aero., Electrical, and Mech.: Engr. 1A, 22 | | |
| Chem.: Chem. 5, 101 | | |
| Civil: Engr. 1A-1B | | |
| Econ.: Bus. 14A-14B | | |
| Electron.: * Lit. or Phil. and elective | | |
| | 16½ | 15½-16 |

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* General education courses. (Nine additional pattern credits allowed for chemistry and physics to apply toward general education requirements.)

### Upper Division Requirements for All Engineering Students

| Junior Year | *Units* 1st Sem. | 2d Sem. |
|---|---|---|
| Engr. 100A-110B | 3 | 3 |
| Engr. 102A-102B | 3 | 3 |
| Engr. 127, 140 | 3 | 3 |
| * Health Educ. 21 | 2 | – |
| * Ind. Arts 5 | 3 | – |
| ‡ * Soc. Sci. elective | – | 3 |
| | 14 | 12 |

| Senior Year | *Units* 1st Sem. | 2d Sem |
|---|---|---|
| † * Literature or Philosophy | – | 3 |
| * Econ. 170 | 3 | – |
| Engr. 105 | – | 3 |
| Engr. 199 | – | 2 |
| Engr. 180 | – | 3 |
| | 3 | 8–11 |

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‡ Chemical engineers take social science elective in first semester of senior yea All students should remove U. S. history-Constitution requirement by examination by taking appropriate social science courses.

† *Electronics engineers take literature or philosophy first semester of sophomo year.

Additional requirements for various fields of specialization:

### Aeronautical Engineering

| Junior Year | *Units* 1st Sem. | 2d Sem. |
|---|---|---|
| Engr. 101A | 2 | – |
| Engr. 141 | – | 2 |
| Engr. 101B | – | 2 |
| | 16 | 16 |

| Senior Year | *Units* 1st Sem. | 2d Sem |
|---|---|---|
| Math. 118A | 3 | – |
| Engr. 122 | 4 | – |
| Engr. 129, 106 | 2 | [illegible] |
| Engr. 142, 156 | 3 | [illegible] |
| | 15 | [illegible] |

### Chemical Engineering

| | Units | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Engr. 141 | – | 2 |
| Chem. 110A-110B | 3 | 3 |
| Elective | – | 2 |
| | 17 | 16 |

| | Units | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Math. 118A | 3 | – |
| Engr. 129, 106 | 2 | 2 |
| Chem. 144A-144B | 3 | 3 |
| Chem. 102 | 2 | – |
| * Soc. Sci. electives | 3 | – |
| | 16 | 16 |

### Civil Engineering

| | Units | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Engr. 130 | 3 | – |
| Engr. 141 | – | 2 |
| Elective | – | 2 |
| | 17 | 16 |

| | Units | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Math. 118A | 3 | – |
| Engr. 142, 106 | 3 | 2 |
| Astronomy 3 | 3 | – |
| Elective | 4 | 3 |
| | 16 | 16 |

### Electrical Engineering

| | Units | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Engr. 101A-101B | 2 | 2 |
| Engr. 141 | – | 2 |
| | 16 | 16 |

| | Units | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Math. 118A | 3 | – |
| Engr. 129 | 2 | – |
| Physics 102 | 3 | – |
| Physics 107 | 2 | – |
| Elective | 3 | 4 |
| | 16 | 15 |

### Electronics Engineering

| | Units | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Engr. 104 | – | 3 |
| Physics 102 | 3 | – |
| | 17 | 15 |

| | Units | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Math. 118A | 3 | – |
| Engr. 101A-101B | 2 | 2 |
| Engr. 124 | – | 2 |
| Engr. 150 | – | 3 |
| Physics 107 | 2 | – |
| Physics 122 | 2 | – |
| Physics 152 | 2 | – |
| Elective | 3 | – |
| | 17 | 15 |

### Engineering Economics

| | Units | |
|---|---|---|
| **Junior Year** | *1st Sem.* | *2d Sem.* |
| Elective (to include at least one of the following laboratory courses: Engr. 101A, 101B, 106, 129, 141 | 2 | 4 |
| | 16 | 16 |

| | Units | |
|---|---|---|
| **Senior Year** | *1st Sem.* | *2d Sem.* |
| Econ. 150, 140 | 3 | 3 |
| Econ. 133 | 3 | – |
| Business 18A | 3 | – |
| Business 121 | 3 | – |
| Elective | – | 3 |
| | 15 | 17 |

### Mechanical Engineering

| Junior Year | *Units* *1st Sem.* | *2d Sem.* |
|---|---|---|
| Engr. 101A-101B | 2 | 2 |
| Engr. 141 | – | 2 |
| | 16 | 16 |

| Senior Year | *Units* *1st Sem.* | *2d Sem* |
|---|---|---|
| Math. 118A | 3 | – |
| Engr. 122, 106 | 4 | 2 |
| Engr. 128, 145 | 3 | 3 |
| Engr. 129 | 2 | – |
| | 15 | 16 |

## HOME ARTS CURRICULUM

The Home Arts curriculum is designed to meet the needs of those student who wish to apply their knowledge to the various problems of home living. This curriculum is based on the *general major* in arts and sciences with a field of concentration i Home Economics combined with two other fields to be selected by the student in consultation with the home arts adviser and the Dean of Instruction. (Refer to the General Major in the section of the bulletin entitled: Bachelor of Arts Degree.) By appropriate selection of courses, the student may prepare for several related fields, suc as radio, community recreation, home service in industry, merchandising, and socia work.

*Summary of unit requirements:*

| | *Unit* |
|---|---|
| General education | 4 |
| Preparation for the general major | 2 |
| General major (upper division) | 3 |
| Electives | 1 |
| Total units required for graduation | 12 |

*Specific requirements for the major:* Lower division: Home Economics 1, 5, 10 55, 61A-61B; Sociology 50 and 51; six lower division units in a third field. Uppe division: 15 upper division units to be selected from Home Economics 100, 101, 105 135, 150, 160A-160B, 170, with the approval of the adviser in home arts; nine uppe division units to be selected from a second field; and 12 upper division units to b selected from a third field. A minimum of six lower division units is usually required i each field of the general major as preparation for upper division work.

Students should consult with the adviser in the home arts curriculum for selection and arrangement of courses.

## INTER-AMERICAN RELATIONS

This curriculum, designed around the general major, provides (1) a basis for a more effective understanding of the opportunities and problems of international relations in the western hemisphere; (2) facilities for a basic education and training for a business or professional career involving international relations; (3) undergraduate preparation for the comprehensive examinations required for appointment in the Foreign Service, Department of State.

High school students preparing to enter this area of Foreign Service should include in the high school program three years in one foreign language, preferably Spanish.

Students should consult with the adviser in Inter-American Relations regarding an appropriate program of studies.

## JOURNALISM CURRICULUM

The purpose of the journalism curriculum is to prepare students for positions on mass communications media and to offer to teacher candidates background for educational work in journalism. The four-year program contemplates that in addition to professional training, majors shall acquire a broad background in such related fields as English, sociology, psychology, political science, economics, and history. All majors are required to take survey courses in newspaper and radio techniques and photography. Introductory courses in mass communications research are offered. The program is so designed that during the final two years, majors may take specialized work in newspaper reporting and editing, magazine writing, advertising and radio production. Producing the campus newspaper serves as a laboratory for students. Arrangements are made for students to serve internships on daily and weekly newspapers, industrial magazines and radio stations.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 12–15 |
| Major (upper division) | 24 |
| Electives | 40–43 |
| Total units required for graduation | 124 |

*Specific requirements for the major:* Lower division: Journalism 51A-51B, Physical Science 10, Speech Arts 81, and Business 2A, or proficiency in typing. Upper division: 24 upper division units in journalism including Journalism 102 and 151. A minor is not required.

## LABORATORY TECHNIQUE CURRICULUM

The laboratory technique curriculum is offered with the B.S. degree. This curriculum, with modifications for the types of licensures, is provided to satisfy the academic requirements to qualify for the examinations given by the State of California Public Health Department for Public Health Bacteriologist, Clinical Laboratory Technician, and Medical Technologist. If the curriculum outlined by this College is followed, only six months of apprenticeship are required to complete the qualifications for the licensing examinations for Public Health Bacteriologist and Clinical Laboratory Technician. Five years of experience as a Clinical Laboratory Technician are necessary to qualify for the examination for licensure as a Medical Technologist.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major required for State licensure exclusive of General Education courses | 23–37 |
| Major (upper division) | 36–44 |
| Electives | 2–24 |
| Total number of units for graduation | 128 |

*Specific requirements for the major:* Lower division (including courses in General Education, but required for licensure): Chemistry 1A-1B, * Chemistry 5, Biology 3 and 4 or Zoology 1A-1B, Bacteriology 1 or 101, Physiology, 1A and 1C, * Physics 2A and 3A. Upper division: 36 upper division units, including Chemistry 101, * Chemistry 114, 115, 116, Bacteriology 102, 103 and one or more courses selected from Bacteriology 105, 106 or 107, * Zoology 109, Zoology 128, 104, 126, and 108, and additional electives to complete the major. Twelve units of science courses in the major field may be counted as general education in natural science.

Students should consult with the adviser in the Laboratory Technique Curriculum for selection and arrangement of courses.

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* These courses are not required for the Public Health Bacteriologist license.

## PRELEGAL CURRICULUM

The entrance requirements of schools of law range from two years to three and four years of prelegal work. The lower division requirements of the arts and sciences curricula should be met in full whether the prelegal curriculum extends over a period of two, three, or four years.

The following curriculum is designed to meet the recommendations of standard American schools of law for a broad and liberal education. For the majority of pre-legal students a general major with concentration in economics, political science, and history, or a major-minor combination in these fields will constitute the most effective preparation for later professional study in law and for later activities in the field of business.

*Preparation for the major:* Lower division: Business 14A-14B, Economic 1A-1B, Political Science 71A-71B or 1A-1B, and a year-course in history. Recon mended: six units from Philosophy 1A-1B, 3A-3B, or 20.

### Upper Division

In the junior and senior years the student will plan his course with the couns of his adviser in terms of the field of law in which he plans to work, but keeping i mind the entrance examinations and other requirements for admission to schools c law. The course selected will be drawn from the preferred and recommended list below. Optional courses, that is courses not found in the preferred and recommende lists, may be taken to satisfy the general major pattern requirement, but only wit the consent of the student's prelegal adviser. These courses are not to be considere as general electives.

The student must complete a master plan approved by the prelegal adviser an filed with the Registrar.

*Preferred List*

Economics 133, 150, 151, 170.
History 151A-151B, 172A-172B, 175A-175B.
Philosophy 121, 129.
Political Science 139A-139B.
Psychology 145.
Sociology 173, 174.

*Recommended List*

Economics 102, 110, 111, 128, 131, 13 142, 171, 172, 185, 190, 195.
English 106, 120, 126A-126B, 129, 131 192.
History 111A-111B, 121A-121B, 143A 143B, 175A-175B, 179A-179B, 181A 181B.
Philosophy 101, 111A-111B, 130.
Political Science 105, 111A-111B, 120 121, 122, 140A, 140B, 142, 143, 150A 150B, 152, 153, 154, 158A-158B, 198
Sociology 152, 170, 174, 187.
Speech Arts 162, 191, 192.

## LIFE SCIENCE VOCATIONAL CURRICULA

Vocational curricula are offered for the fields of entomology, fish and game and wild life. Requirements for these curricula are the same as for the B.S. degree i zoology; the specialization for a particular occupation lies within the upper divisio electives of the B.S. degree program.

Students in high school planning to enter any of these life science curricula should include in the high school program the following subjects: Elementary algebra, plane geometry, intermediate algebra, trigonometry, chemistry, and physics. Thre years of French or German recommended.

*Courses in Entomology, Fish and Game, and Wild Life:* Courses in the field of specialization may be selected from the following:

Botany 105, Taxonomy of Plants
Chemistry 101, Organic Chemistry
Economics 140 or
 Psychology 104, Statistics
Political Science 140A-140B, Public Administration
Zoology 101, General Physiology
Zoology 104, Microtechnique
Zoology 113, Ornithology
Zoology 115, Cold Blooded Vertebrates
Zoology 118, Mammalogy
Zoology 121, General Entomology
Zoology 122, Systematic Entomology
Zoology 125, Economic Entomology
Zoology 126, Medical Entomology
Zoology 128, Parasitology
Zoology 153, Economic Biology

Students should consult with the adviser in the life science curricula for selection and arrangement of courses.

## PREMEDICAL CURRICULUM

The entrance requirements of medical colleges ordinarily range from three to four years of premedical work. The lower division requirements of the liberal arts curricula include the general requirements of standard medical colleges and should therefore be met in full whether the curriculum extends over a period of three or of four years. All plans for premedical work should include an arrangement of courses to meet the requirements of the medical college which the student expects to enter.

Students ordinarily elect to concentrate in chemistry and zoology with a major n one and a minor in the other. Requirements for these majors and minors are decribed under these departments.

High school students planning to enter medicine should include in the high school rogram the following subjects: Elementary algebra, plane geometry, intermediate lgebra, chemistry, physics, two or three years of French or German. Two years of atin also recommended.

Students should consult with the adviser in the premedical curriculum for election and arrangement of courses.

## PERSONNEL MANAGEMENT CURRICULA

A student desiring to prepare for personnel management may follow one of the hree plans outlined below. Emphasis is placed on different areas, depending upon the ocational objective. A student preparing for graduate work in personnel managenent should consult with the adviser in his selected field in choice and arrangement f courses. Courses in the major are in addition to 45 units in general education courses.

*Business Personnel Management:* The major is designed around the general najor with the three fields of study in business, economics, and psychology. Lower livision requirements: Business 14A and 20, Psychology 6, and Economics 1A-1B (15 nits). Upper division requirements: Business 121, 153, 154, 198A; Economics 150, 51, 185; Psychology 104A, 105A, 121, 131, 152 (36 units). Other courses in business nay be substituted for Business 14A and 198A on the basis of individual counseling. Four additional upper division units must be completed for graduation. It is recomnended that these units and additional electives be chosen from the following: Busiess 186; Psychology 104B, 122, 132; Sociology 110, 170, 185; Political Science 71A, 71B and 143.

*Industrial Personnel Management:* The major is in the field of psychology with a minor in business, economics, political science, or sociology. Lower division requirements: Psychology 1, 5, and 6; six units in biology, physiology, and/or zoology; three units in philosophy; and six units in anthropology and/or sociology (24 units). Upper division requirements: 24 upper division units to include Psychology 121, 122, 131, 132, 145, 152, 160B, and electives in psychology to be selected in consultation with the departmental adviser. Recommended courses in departments other than psychology: Business 103A, 153 and 154; Economics 1A-1B, 100A, 150, 151, 170, and 185; Philosophy 20; Political Science 144 and 145; Sociology 50, 51; and six units selected from Sociology 135, 170, 180, 190; and Speech Arts 4.

*Public Personnel Management:* The major is designed around the general major with the three fields of study in political science, economics, and psychology. Lower division requirements: Political Science 71A-71B, Economics 1A-1B, and Psychology 6 (15 units). Upper division requirements: Political Science 140A-140B or 147A-147B, 144, 145, 146, 198; Economics 150, 151, 185; Psychology 104A, 105A, 121, 131, 152 (36 units). Another political science course may be substituted for Political Science 198 on the basis of individual counseling. Four additional upper division units must be completed for graduation. It is recommended that these units and additional electives be chosen from the following: Business 121; Economics 131; Political Science 142, 143.

## PREPHARMACY CURRICULUM

Some colleges of pharmacy offer a four-year curriculum, others a six-year curriculum of pharmacy. Students should ascertain the extent and requirements of the curriculum of the college of pharmacy they expect to enter. Colleges of pharmacy which offer the four-year curriculum normally permit not more than one year of credit in time for work completed in an institution other than a college of pharmacy. Colleges of pharmacy which offer a six-year curriculum normally permit not more than two years of credit in time for work completed in an institution other than a college of pharmacy. California state law requires that an applicant for the State Board Examination in Pharmacy must be a graduate of a recognized college of pharmacy which requires a resident attendance of not less than four years.

The high school program should include the following subjects: Elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; foreign language, 2 units.

At San Diego State College the following prepharmacy curricula are offered:

*Course of study for the four-year curriculum:* Freshman year, physical education activities, English 1 and a literature course, Chemistry 1A-1B, Zoology 1A-1B Botany 1, Mathematics 3A or 1, and electives (32 units).

*Course of study for the six-year curriculum:* Freshman year same as for th four-year curriculum. Sophomore year, physical education activities, foreign languag if needed, social science including U. S. history and Constitution courses, Physic 2A-2B and 3A-3B, Psychology 1, Health Education 21, and electives (32 units).

Students should consult with the adviser in the prepharmacy curricula for selection and arrangement of courses.

## PUBLIC ADMINISTRATION CURRICULUM

The program of training in public administration can be developed through a adaptation of a general major or through a major in political science. In either case the student will follow a sequence of work dealing with the principles and problem of organization for the carrying out of the functions of government, and public management. This latter aspect deals primarily with the directing and coordinating o work operations, the staffing of public agencies, the processes of budgeting and financial control, and the dynamics of management, namely planning, research, communications, leadership and human relations in the administrative process.

The public administration curriculum may be adapted to several goals, one bein the taking of junior administrative examinations for entrance into the governmen service at the local, state or federal levels, and preparation for advancement up th governmental ladder. It is designed also to prepare students for graduate work i public administration.

Selected students may participate in an internship program in local governmen offices. Working under the close supervision of governmental officials and the advise in public administration, the intern deals with actual administrative procedures an problems in government.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 12 |
| Major (upper division) | 36 |
| Electives | 31 |
| Total units required for graduation | 124 |

*Specific requirements for the major:* Lower division: Political Science 71A-71B Economics 1A-1B. Upper division: 36 upper division units, including Political Science 140A-140B, 198, Economics 131, and 140.

Students planning to enter public administrative fields should consult with a adviser in public administration.

### Minor

A *minor in public administration* is offered in arts and sciences for student majoring in fields other than political science or public administration. This mino consists of Political Science 71A-71B, 140A-140B, and three units of upper divisio work selected from Political Science 198, Internship in Government Administration or other political science course.

## RECREATION CURRICULUM

The curriculum in recreation is arranged under the plan for the general majo to provide a program to train for recreation and camp leadership, work with yout groups, and related activities. Refer to the general major in the section of the bulleti entitled: A.B. Degree in Arts and Sciences.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 20–22 |
| General major (upper division) | 36 |
| Electives | 21–23 |
| Total number of units required for graduation | 124 |

*Specific requirements for the major:* Lower division: Physical Education 2A, 4, 5, 6 (women); Physical Education 63 (men); Physical Education 53, Sociology 50, 51; and 12 units selected from the fields of art, industrial arts, music, physical education, and speech arts, with a maximum of six units in any one field (20-22 units). Upper division: 36 units distributed as follows: 13 units selected from Recreation 165, 170A-170B, 184A-184B, 199; nine units selected from Sociology 110, 173, 174, 185, 187, 190; nine units selected from Psychology 106, 131, 132, 145, 150, 170; Education 174. Physical Education 151. Four additional upper division units in electives are required to complete the 40 upper division units for graduation.

Students should consult with the adviser in the Recreation Curriculum for selection and arrangement of courses.

## PRESOCIAL WORK CURRICULUM

The professional curriculum in social service prepares for admission to graduate work in recognized American schools of social work. This curriculum should be pursued by those who plan careers in federal, state and local welfare work; social work in public schools including preparation for a teaching credential; family and children's private case work agencies; social settlement work; county probation work; child welfare agencies; statistical and investigational work in private and public agencies; work in public institutions for the defective and delinquent; medical social service and psychiatric social work in hospitals and clinics; executive positions in social work; and social work in numerous other organizations.

The lower division requirements of the arts and sciences curricula include the general requirements of recognized professional schools of social work and should therefore ordinarily be met in full. The courses indicated below meet the requirements for the general major. For description of the general major, refer to the section in the bulletin on the bachelor of arts degree in arts and sciences.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 21 |
| Major (upper division) | 38 |
| Electives | 20 |
| Total number of units for graduation | 124 |

*Specific requirements for the major:* Lower division: Sociology 50 and 51, Economics 1A-1B, Political Science 71A-71B or 1A-1B, and Psychology 11 (21 units). Biology 1 or 3 and 4 should be taken as general education courses in natural science. Recommended: courses from anthropology, foreign language, and speech arts. Upper division: Sociology 103, 187, 190, and an upper division elective (12 units); Economics, nine units selected from 102, 131, 150, 170, 185, 195; Political Science, six units selected from 140A, 140B, 142, 143; Psychology 145, 150, 151 (nine units); Zoology 165 or 155 (two units). An additional two units in upper division electives must be taken to complete the 40 upper division units required for graduation. Twelve units of social science in the major field may be counted as general education in social science.

Students should consult with the adviser in the social work curriculum for selection and arrangement of courses.

# ANNOUNCEMENT OF COURSES

## COURSE NUMBERS

Courses numbered from 1 to 99 are lower division (freshman or sophomore courses; those numbered 100 to 199 are upper division (junior or senior) courses those numbered 200 to 299 are graduate courses (see section on Admission and Registration for information concerning eligibility to enroll in these courses) those numbered 300 to 399 are professional education courses to be taken at the graduate leve

## CREDIT FOR UPPER DIVISION AND GRADUATE COURSES

A student with lower division standing is not eligible to take upper divisio courses, with the following exceptions: A student in the last semester of his sophomor year who is approaching upper division standing must carry sufficient lower divisio units to complete the required minimum of 60 units may carry upper division unit for the remainder of his study load. A student with sophomore standing may carr upper division courses for upper division credit provided that he has the writte approval of the chairman of the department and the Dean of Instruction. This writte approval must be filed in the Office of the Registrar on the form "Adjustment o Academic Record." Blank forms may be obtained by the student at the Office of th Registrar.

Graduate credit for courses numbered 200 to 299 is limited to students wit graduate status. (See Admission to Graduate Study in section on Admission an Registration.)

## GENERAL EDUCATION COURSES

Course numbers preceded by a "G" in parentheses are general education course which may apply toward requirements in general education unless specifically required as a part of the major field. Refer to the list of general education courses i the section of the bulletin entitled: General Requirements for the Bachelor of Art and Bachelor of Science Degrees.

## UNITS

Figures in parentheses indicate the unit value of the course.

One "unit" represents 50 minutes of recitation or lecture, together with th required preparation, or three hours laboratory work each week for a semester o 18 weeks.

## SEMESTER IN WHICH COURSES ARE OFFERED

Roman numeral I indicates course is offered in Fall semester. Roman numeral I indicates course is offered in Spring semester.

Following the course title are designations of credit and the semester in whic course is offered. Examples:

(3) I___________________________________Three units. Offered first semeste

(3) I, II_______________Three units. Offered first semester and second semeste

(3-3) Year, I
Three units each semester. Year sequence beginning in the first semeste

(3-3) Year, I, II
Three units each semester. Year sequence beginning either semeste

Although the college fully expects to carry out the arrangements planned in th list of courses, it reserves the right to make changes. Classes in which the enrollmen does not come up to the minimum number set by the State Department of Educatio may not be offered or may be postponed.

### PREREQUISITES

Prerequisites for courses are stated. A student should not enroll in a course for hich he is not eligible.

Admission to all graduate courses requires graduate status and permission of the nstructor.

### PROVISIONAL COURSES

Courses number 40 to 45 are open only to students who are in the provisional rogram. Other students (those not having provisional status) are not eligible to ake these courses.

# ACCOUNTING AND BUSINESS MANAGEMENT

## IN THE DIVISION OF BUSINESS

### Major

A *major in arts and sciences* is offered in *business* for the A.B. degree. Students ajoring in this department may specialize in one of the following sub-fields: (A) Acounting, (B) Banking and Finance, (C) Business Management, (D) Insurance, nd (E) Credit Management. Courses in the major are in addition to 45 units in eneral education courses. The following courses are required in the lower division r all sub-fields: Business 2, 8, 14A-14B, 18A-18B; and Economics 1A-1B.

Upper division requirements: A minimum of 24 upper division units. The folwing courses must be included: Economics 111 or 170 or Business 123; Economics 40; Business 121; and 15 units selected from one of the following sub-fields:

A. *Accounting:* Business 118A-118B, 160A-160B, 161A-161B, 162, 163, 164A-164B, 165A-165B, 167, 169.

B. *Banking and Finance:* Business 133, 134, 137, 154; Economics 131, 135, 142.

C. *Business Management:* Business 118A-118B, 123, 125, 126, 127A, 133, 134, 137, 153, 154, 163, 184; Economics 128, 135, 142, 150, 170.

D. *Insurance:* Business 118A-118B, 125, 126, 127A-127B, 128A-128B, 128C-128D, 128E-128F, 133, 134; Economics 135.
Recommended Economics 170; Sociology 50, 51, 153.

E. *Credit Management:* Business 123, 125, 133, 134, 137, 153; Economics 131, 135, 142, 170.

A minor in some field other than business is required of all majors.

### Minor

A *minor in arts and sciences* is offered in *business* with specialization in one of e sub-fields listed under the major above. The minor consists of a minimum of 15 nits, or maximum of 22, six units of which must be in upper division courses selected rom one of the sub-fields listed under the major above. Business 14A-14B must be cluded in the minor.

A *teaching minor* is not offered in business but is offered in *business education* r the general secondary school credential. For statement of requirements, refer to the redential.

### Courses in Accounting and Business Management

All business courses in this department for the major or minor are listed in is section of the bulletin under Business.

# AESTHETICS

## IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is not offered in aesthetics; however, certain cour in this field are required as part of the majors in art and in music. For specific infor tion, refer to these departments.

A *teaching major* is not offered in aesthetics; however, certain courses in t field are required as part of the teaching major in art for the general secondary a the special secondary credentials in these fields. For specific information, refer to outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is not offered in aesthetics.

A *teaching minor* is not offered in aesthetics; however, certain courses in t field are required as part of the teaching minor in art for the general second credential. For specific information, refer to this credential.

### Lower Division Courses

**(G)2. Introduction to Music (3) I**

Practical approach to hearing music with understanding and pleasure, thro study of representative compositions of various styles and performance media, gr musicians and their art. Music correlated with other arts through lectures, recordi concerts. Closed to music majors or minors.

**(G)5. Art Orientation (2) II**

An illustrated lecture course dealing with aesthetic meaning and its relat to the structure of art products. Designed to increase both understanding and ap ciation of the visual world in general and of the fine arts in particular.

**(G)50. Appreciation and History of Art (2) I**

A survey of art development in the painting, sculpture, architecture, and ha crafts from dawn of art to the Renaissance. Illustrated.

**(G)51. Survey of Mexican Art (2) I**

A study of Mexican and Middle American Art from earliest time to present.

**(G)102. Great Music (3) II**

Instrumental and vocal music in the larger forms studied through direc listening. Artistic trends and their effect upon music composition and performance. prerequisite, but completion of Aesthetics 2 recommended. Closed to music maj Formerly Aesthetics 100.

**(G)138. Introduction to Aesthetic Appreciation (1) I**

Major forms of expression and aesthetic experience in art, music and literatu presented by an interdepartmental staff through lectures, demonstration, and pa discussions. Not open to students with credit for Comparative Literature 138.

**(G)150. Appreciation and History of Art (2) II**

The period from the Renaissance through the modern school treated in the sa manner as in Aesthetics 50.

**160. Techniques and Procedures of the Art Museum Worker (3) I**

Designed to acquaint the student with the nature and function of the art muse in the community and to give him experience in the methods by which it serves public. Prerequisite: Aesthetics 5 or 50 and 150.

**(G)162. History and Philosophy of the Dance (2) I**

Historical background and appreciation of dance, with special emphasis u the development of art in America. The justification for dance as an educational a creative art medium and its place in the curriculum. Not open to students with cre for Physical Education 162.

# AIR SCIENCE

## IN THE DIVISION OF AIR SCIENCE AND TACTICS

### Air Force Reserve Officers' Training Corps

The Department and Division of Air Science and Tactics appear for the first time t San Diego State College beginning with the Fall semester, 1951, offering the curiculum prescribed by the Air Force Reserve Officers' Training Corps. This curriculum onsists of a four-year course, including a two-year basic course and a two-year adanced course.

The objectives of the Air Force ROTC program are the development of qualities f leadership and character essential to civil and military responsibility and the training of officer reserve personnel. Completion of the four-year course and a bachelor's egree leads to commission in the Air Force Reserve. Students who have demonstrated utstanding qualities of scholarship and leadership may receive regular commissions n the Air Force. A maximum of one-third of the students graduating in the program may be eligible to receive the regular commission.

Flight training is not offered as part of this program ; however, Air Force ROTC raduates have a high priority for such training and, if accepted, serve as reserve officers n active duty during the training period.

*Eligibility:* A regularly enrolled male student is eligible for admission to the basic ourse if he is a citizen of the United States, not less than 14 years of age and has not eached his 23d birthday (veterans under 25), and is physically qualified for military raining. Up to one year of pattern credit may be allowed toward the basic course for igh school ROTC training. For admission to the advanced course, the student must ot have reached his 27th birthday and must have completed the basic course or its quivalent. At the discretion of the Professor of Air Science and Tactics, up to two ears of pattern credit in the basic course may be allowed for prior active service in he armed forces. Normally, a student entering the advanced course must have two ears of college work remaining. The applicant must pass required screening tests and e selected by the Professor of Air Science and Tactics and the President of the College.

Attendance at one summer camp is required of each student to qualify for the ommission. The summer camp is six weeks in length and is held at an active Air orce base. The student receives $75 per month during this training period. Uniforms, quipment, subsistence, and transportation are furnished by the Air Force.

Students in the basic and advanced courses are furnished uniforms, equipment, nd textbooks. Students in the advanced course are given, in addition, commutation of ubsistence allowance of approximately $27 per month. Upon acceptance of this allownce, the student executes a written agreement with the United States Government and ith the President of the College to complete the advanced course, completion of such ourse becoming a prerequisite to graduation.

### Basic and Advanced Courses

The basic course requires three hours of instruction and drill per week each emester. The advanced course requires five hours. In addition, each student in the dvanced course must attend one summer camp of six weeks. The advanced course is ffered in three separate specialties to prepare the student for one of three distinct areer fields in the Air Force. These options are General Technical, Administration nd Logistics, and Flight Operations. Student selection of specialty is based primarily n the academic pursuits of the individual and the approval of the Professor of Air cience and Tactics. Students enrolled in the AFROTC program pursue their regular ourses of study in fields of their choice. Major work is not offered in air science and actics, but a minor is offered.

### Minor

A *minor in arts and sciences* is offered in *air science and tactics.* The minor conists of at least 15 units of work, six units of which must be taken in the advanced ourses.

### Lower Division Courses

**A-1B. First-Year Basic Air Science** (2-2) Year, I

Two hours of classroom instruction and one hour of drill per week. World Political Geography to provide the AFROTC student with a general knowledge of geopolitics and a global viewpoint for use in directing his future studies of subsequent Air Force subjects.

**21A-21B. Second-Year Basic Air Science** (2-2) Year, I

Two hours of classroom instruction and one hour of drill per week. Maps an aerial photographs, aerial navigation, meteorology, aerodynamics and propulsion, ap plied air power, organization for the defense of the U. S. A., personal maintenanc and weapons familiarization.

### Upper Division Courses

**131A-131B. First-Year Advanced: General Technical** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. The primar technical fields and the related equipment used in the Air Force.

**132A-132B. First-Year Advanced: Administration and Logistics** (3-3) Year,

Four hours of classroom instruction and one hour of drill per week. Individua records, nonappropriated funds, transportation, and supply.

**133A-133B. First-Year Advanced: Flight Operations** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. An augmen tation of the academic phases of the training in the Flying Schools of the Air Trainin Command. (Student must be qualified for and express the desire to undertake flyin training upon receipt of commission. Training will be taken as a student officer in grad of 2nd Lieutenant upon completion of the academic and AFROTC programs.)

**141A-141B. Second-Year Advanced: General Technical** (3-3) Year, I (no offered 1951-52)

Four hours of classroom instruction and one hour of drill per week. A continua tion of Air Science 131A and 131B.

**142A-132B. Second-Year Advanced: Administration and Logistics** (3-3 Year, I (not offered 1951-52)

Four hours of classroom instruction and one hour of drill per week. Purpose an basic functions of the staff, administration of personnel at wing-base level, function of Comptroller and Food Service Supervisor.

**143A-143B. Second Year Advanced: Flight Operations** (3-3) Year, I (no offered 1951-52)

Four hours of classroom instruction and one hour of drill per week. Advance instruction in navigation and bombing and the theory of radar as applied to both.

# ANTHROPOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is not offered in anthropology; however, uppe division units in anthropology may be planned under the *general major* program. Stu dents wishing to use anthropology as a field of concentration in the *general majo* should include the following courses in the lower division: Anthropology 1A-1B, 2 o 3; Geography 1, 2 or Geology 1A-1B; Sociology 50, 51; recommended: Spanish o German. The following supplementary fields of study are recommended in the uppe division with a view to later specialization in anthropological work: For *archaeology* Art, geography, geology; for *physical anthropology:* Psychology, statistics, an zoology; for *museum work:* Art, education, and psychology. For further informa tion on the *general major*, refer to the section on the Bachelor of Arts Degree.

A *teaching major* is not offered in anthropology; however, it may be used a part of the *social science major* for the general junior high school credential or th general secondary credential. For specific information, refer to the outlines of th requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in anthropology. The minor must include a least 15 units of work in anthropology, nine units of which must be from courses carry ing upper division credit.

A *teaching minor* is not offered in anthropology for the general secondary cre dential; however, anthropology may be used as a part of the *social science minor* fo the special secondary, the general elementary, and the kindergarten-primary credentials For specific information, refer to the requirements for the teaching minor for thes credentials.

## Lower Division Courses

**(G)1A-1B. General Anthropology** (3-3) I

Origin and antiquity of man. Theories of human descent. Classification of races. Origin and early development of civilization.

**2. Physical Anthropology** (3) I

An introduction to the studies of primatology and anthropometry. The comparative anatomy of the monkeys and great apes, the emergence of the anthropoids, the reconstruction of early man from fossil evidence. The landmarks, measures and indices used in the metrical study of the living human body and skeletal material. Sexual differences and growth changes in the skull and skeleton. Medico-legal applications.

**3. Survey of Archaeology** (3) II

A review of the history of modern archeology and a discussion of its methods. The development of archaeological techniques in reconstructing the ancient cultures of the Mediterranean world. The problems of present day archaeology in the Near East, the Orient and the Americas. The principles and basic techniques used in the excavation of sites and the reporting of findings.

**(G)54. Social Anthropology** (3) II (Not offered in 1951-52)

An anthropological study of social institutions in primitive and civilized societies. The evolution of family organization, religion, property right, and government traced in elementary and advanced civilization.

## Upper Division Courses

**151A. The North American Indian** (3) I (Not offered in 1951-52)

Pre-Columbian cultures of the North American Indian. The origin and migration of New World peoples. Industries, arts, crafts, social organization, religion and other phases of American Indian civilization.

**151B. Indian Civilization of Middle America** (3) II (Not offered in 1951-52)

The development of civilization in Pre-Columbian Mexico and Central America: Aztec, Mayan, and related cultures.

**(G)152. World Ethnography** (3) I

The cultural patterns of representative aboriginal peoples. Industries, arts, social organization and supernaturalism considered with a view to environmental adjustment, historical development and functional interrelation. Ethnological theories reviewed and applied in interpreting illustrative aboriginal societies.

**153. Primitive Religion** (3) II

Beliefs and ritual of primitive man. Magic and religion. Forms of animism and polytheism. Primitive mentality and the supernatural.

**161. The California Indian** (3) Summer

A survey of native California Indian culture with stress on the Indian groups of Southern California. The industries, arts, social organization, folklore and religion will be considered as revealed through the study of living peoples and archaeological evidences.

**(G)165. Ethnology and Race Psychology** (3) I (Not offered in 1951-52)

The biological basis of race, somatic and serologic typology, racial mentality, tests and their ethnopsychological significance, abnormality in ethnic groups. Race and culture; ethnic aspects of demography.

**172. Indian Cultures of the Southwest** (3) Summer

Indian cultures of the past and present in the Southwestern states. Arts, crafts, architecture and religion as revealed through archaeology and ethnology.

**199. Special Study** (1-3) I, II

Maximum of six units may be allowed.

# ART

## IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is offered in *art* for the A.B. degree. Courses in th major are in addition to 45 units in general education courses. Every student who plan to major in art, whether in arts and sciences or in the teacher education program, shoul complete the following basic courses: Aesthetics 5 or 51 and 50, Art A-B, 6A-6B, an 14A. In arts and sciences the student majoring in art may choose either a group o courses in which the crafts are emphasized or a group of courses in which the graphi arts are emphasized. One of the following plans should be selected:

*Emphasis on crafts:* The student should add to the list of basic courses require of all art majors the following courses: Lower division: Art 6D, 7, 61B and two unit of art electives; upper division: Aesthetics 150, Art 106A or B or C, 106D, 111A 117A-117B, 119A-119B, and eight units of art electives. This program leads in th direction of industrial design, interior design, cabinet making, sculpture, weaving textile design, ceramics, etc.

*Emphasis on graphic arts:* The student should add to the list of basic course required of all art majors the following courses: Lower division: Art 15A, 16A, an four units of art electives; upper division: Aesthetics 150, Art 106A or 106B, 112A 112B, 115A-115B, 116A-116B, 117A, and six units of art electives. This program lead in the direction of illustration, portraiture, landscape painting, mural design, poste design, production illustration, advertising design, fashion design, etc.

A *teaching major in art* is offered for the general secondary and special secondar credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *art*. The minor must include at leas 15 units of work in art, or maximum of 22, six units of which must be from course carrying upper division credit.

A *teaching minor* is offered in *art* for the general secondary credential. Art may b offered only as a second minor for the general elementary and kindergarten-primar credential. For statement of requirements, refer to these credentials.

### Art Appreciation, History and Orientation

For courses in appreciation, history of art, and art orientation, see aesthetics Many students, regardless of the field in which they may be majoring, recognize th need for an intelligent approach to the subject of art and art appreciation. However due to the erroneous popular feeling that art is a subject requiring "talent," these students may refrain from enrolling in art courses. For students who desire a better understanding of art, but who do not hope to acquire any of the art skills, the followin courses are recommended.

| | *Unit* |
|---|---|
| Aesthetics 5, Art Orientation | 2 |
| Aesthetics 50, History and Appreciation of Art | 2 |
| Aesthetics 51, Survey of Mexican Art | 2 |
| Aesthetics 52A-52B, Survey of Oriental Art | 6 |
| Art 8, Costume and Home-furnishing | 2 |

Other courses which require certain skills but which are not beyond the ability of the average college student are:

| | |
|---|---|
| Art 61B, Crafts | 2 |
| Art 6A, Design | 2 |
| Art A, Drawing and Composition | 2 |
| Art 94, Costume design | 2 |

### Lower Division Courses

**Art A. Drawing and Composition (2) I, II**

Problems involving perspective to develop ability to draw still life, furniture exteriors, interiors, and the like. (High school equivalent may excuse the student from this course.)

**t B. Drawing and Composition** (2) I, II
Drawing of mechanical and natural forms by the use of line and value. Emphasis proportion and structure. Some quick sketching, gesture and contour drawing. Pre-uisite: Art A.

**)6A. Design** (2) I, II
Fundamentals of design and composition and theory of color. Basic course used as prerequisite for all advanced work.

**. Design** (2) I, II
Original work in creative design and representation with special stress on modern idencies. Prerequisite: Art 6A.

**. Design** (2) I, II
Study of the principles of design through the making of furniture. Prerequi-e: 6A.

**Line, Color and Display** (2) I, II
The principles of line, color and arrangement applied to store and window display. udy and observation of windows, color and materials used in display. Building mod-s and practical problems in arranging colors, textures, and forms in windows to fit fferent kinds of merchandise. (Students taking this course for upper division credit, t 107, will be required to do additional work.)

**)8. Costume and House Furnishings** (2) I, II
An appreciative study of modern architecture and modern house furnishings, th emphasis on the spirit of gracious living and an appreciative study of the modern ess with emphasis on suitability to the figure, the personality and the occasion.

**A. Lettering** (2) I
Fundamental art principles applied to lettering. Practice for quick, accurate tering; original problems using letters as design. Prerequisite: Art 6A.

**B. Posters and Commercial Art** (2) II
The application of lettering to posters, newspaper and magazine advertising, d other forms of commercial art. The study of composition combined with letter-g and special study of modern tendencies in publicity. Prerequisites: Art 6A, 14A.

**A-15B. Life Drawing** (2-2) Year, I, II
Drawing from the nude model. Prerequisite: Art A-B.

**A-16B. Painting** (2-2) I, II
Semester I: Composition of still life in oil. Semester II: Landscape and more lvanced composition in oil. Prerequisite: Art A-B.

**A-17B. Sculpture** (2-2) I, II
Creative design in such materials as clay, wood, stone, concrete, etc. Prerequisites: rt 6A-6B.

**A. Crafts in the Elementary Schools** (2) I, II
A foundation course which develops unification of work of the elementary grades rough activities and experiences. These experiences grow out of environmental tivities. They include study and working of clay, lumber and tools, textiles, and rdboard construction. Prerequisite: Art 6A.

**B. Crafts** (2) I, II
Problems involving the application of design principles to various fields—pottery, xtiles, weaving, metal work, wood-carving, and book-binding. Prerequisite: Art. 6A.

**A-94B. Costume Design** (2-2) Year, I, II
Original designs of modern costumes suitable to the individual or to distinct pes; the drawing of fashion figures; the rendering of fabrics and textures. Prerequi-te: Art 6A.

**A-95B. Interior Decoration** (See Art 195A-195B)

### Upper Division Courses

**106A-106B. Printmaking (2-2) I, II**
Study of print crafts which includes the making of linoleum blocks, wood engravings, etchings and lithographs. Prerequisites: Art A. B. 6A.

**106C. Illustration (2) II**
Same as 160A-B except that printmaking is applied to problems of book illustration. Prerequisites: Art A, B, 6A.

**106D. Advanced Furniture Design (2) I, II**
(See Art 6D) Prerequisite: Art 6D.

**107. Line, Color and Display (2) I, II**
(See course description under Art 7)

**111A-111B. Industrial Design (2-2) Year, I, II**
Design of objects for manufacture with reference to their use, materials, and i accordance with factory practices and machine techniques. Practice in the technique of presentation, working drawings, renderings in perspective and scale models. Prerequisite: Art 6A-6B.

**112A. Design and Composition (2) I**
Imaginative organization of space by means of color, dark and light, perspective and textures of various materials. Prerequisites: Art A-B, 6A-6B.

**112B. Design and Composition (2) II**
Continuation of Art 112A. Prerequisite: Art 112A.

**115A-115B. Life Drawing and Painting (2-2) I, II**
Drawing and painting from nude and costume models. Prerequisite: Art A-B.

**115C-115D. Advanced Life Drawing and Painting (2-2) Year, I, II**
Study of human figure in terms of form patterns. Prerequisite: Art 115A-115B

**116A-116B. Advanced Painting (2-2) Year, I, II**
Painting in oil from still life, landscape, or models, stressing composition. Prerequisite: Art 16A or 16B.

**117A-117B. Sculpture (2-2) Year, I, II**
Creative design in such materials as clay, wood, stone, concrete, etc. Prequisites: Art 6A-6B and 17A or 17B.

**119A. Ceramics (2) I**
Building of pottery on the basic techniques of coil, slab, mold making, and sli casting. Ceramic sculpture, glazing and kiln operations: Art 6A.

**119B. Ceramics (2) II**
Study of glazes and elementary clay technology. Mold making, slip casting wit application to individual creative problems. Prerequisite: Art 119A.

**166. Honors Course (Credit to be arranged) I, II**
Refer to the Honors Program.

**194A-194B. Costume Design (2-2) Year, I, II**
For description, see Art 94A-94B. Prerequisite: Art 6A.

**195A-195B. Interior Design (2-2) I, II**
The consideration of the house as a unit; the arrangement of garden, house floor plan, and furniture as functional and decorative problems. Prerequisite: Art A and 6A, 195A is a prerequisite for 195B.

**Art. 199. Special Problems in Art (1-3) I, II**
Admission by permission of chairman of department.

### Graduate Courses

**200A-200B. Special Problems (2-2) I, II**
A graduate course in which students may carry out projects in various fields of art under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply for work within a certain field after discussions with the art faculty.

# ASTRONOMY

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is not offered in astronomy. Students desiring to prepare for advanced work in astronomy should include the following courses: Astronomy 1, 2, 3, 9, and 10; Mathematics 3A-3B, 4A-4B; Physics 4A-4B-4C; a reading knowledge of French and German.

A *teaching major* is not offered in astronomy; however, astronomy may be used as part of the general science major for the general junior high school credential. For specific information, refer to the outline of requirements for the general science teaching major for this credential.

### Minor

A *minor in arts and sciences* is offered in astronomy. The minor must include at least 15 units of work in astronomy, nine units of which must be from courses carrying upper division credits.

A *teaching minor* is not offered in astronomy; however, astronomy may be used as part of the *general science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

**(G)1. Descriptive Astronomy** (3) I, II

A cultural course planned to develop an appreciation of astronomy with emphasis on the solar system. Attention is given to the methods by which astronomical knowledge has been gained. A six-inch refractor and an eight-inch reflecting telescope are available for observation.

**(G)2. Modern Astronomy** (3) II

A study of the stellar system in the light of modern research, especially photographic and spectrographic. Prerequisite: Astronomy 1 or permission of the instructor.

**3. Surveyor's Course in Practical Astronomy** (3) II

The principles of spherical astronomy adapted to the needs of engineering students. Computation and observation. Two lectures and one three hour laboratory period each week. Prerequisite: Surveying 1A or permission of the instructor. Astronomy 1 and 9 desirable.

**(G)9. Practice in Observing** (1) I, II

A course designed to supplement Astronomy 1. The course will include constellation study, use of astronomical coordinates, and descriptive observations of celestial objects with the telescope. One evening laboratory period each week Recommended: Astronomy 1 or concurrent registration in Astronomy 1.

**10. Advanced Observational Astronomy** (1) II

A continuation of Astronomy 9. More advanced problems in observing will be taken up such as the determination of azimuth by observations of Polaris, transit observations, astronomical photography, etc. One three-hour evening laboratory period each week. Prerequisite: Astronomy 9.

**12. Elementary Navigation** (3) I

A study of compass corrections, time, line of position, use of celestial coordinates, etc. A few class hours devoted to the use of tables such as H.O. 214 for the solution of astronomical triangle. One laboratory period each week. Astronomy 1 desirable.

### Upper Division Courses

**(G)101. Principles of Astronomy** (3) I (Not offered 1951-52)

A course designed particularly to provide background for teachers. It consists of two lectures and one laboratory period each week. Students will be required to become familiar with the prominent constellations, brighter stars in the sky, and with the general characteristics of the solar and stellar system.

**103. Astronomical Optics** (2) II

This course aims to acquaint the students with the optics and methods of testi an astronomical telescope. The course consists of one lecture and one laborato period each week. The student is required to grind a four-inch astonomical mirr Prerequisite: Astronomy 1 or permission of instructor.

**(G) 105. Historic Development of Astronomy** (3) I (Not offered 1951-52)

A study of the more important problems and astronomical concepts in the lig of their historical development. Particular attention is given to the biography a contributions of the more important astronomers, such as, Galileo, Kepler, Newto Herschel, Bessel, etc.

**107. Method of Least Squares and Computing Practices** (3) I (Not offer 1951-52)

Fundamental principles with applications in the fields of astronomy, physi and engineering. Prerequisite: Math 4A or equivalent.

**110. Introduction to Study of Variable Stars** (3) II (Not offered 1951-52)

A study will be made of the various types of variable stars, their spectra, perio methods of observing, etc. In the laboratory the light curve of several typical variabl will be observed. Two lectures and one laboratory period each week. Prerequisit Astronomy 2. Astronomy 9 desirable.

**112. Elementary Astrophysics** (3) I (Not offered 1951-52)

A lecture course in the application of physics to astronomy: Much of mode astronomical research is in the field of astrophysics. An occasional laboratory peri will be substituted by appointment for the lecture period. Prerequisites: Astrono 2 or college physics.

**199. Special Problems** (1-3) I, II

Admission by consent of instructor. Credit and hours to be arranged in each ca Open to students who have completed three units in astronomy.

## BACTERIOLOGY

### IN THE DIVISION OF LIFE SCIENCES

Major work is not offered in bacteriology. Courses in this field are recommend for students who are preparing to teach science in junior or senior high school, or w are planning to follow a special curriculum in laboratory technique or research in th general field.

### Minor

A *minor in arts and sciences* is offered in *bacteriology*. The minor consists of minimum of 15 units, to include the following: Lower division requirements: Ba teriology 1 (or Bacteriology 101 may be substituted). Recommended: Zoology or Physiology 1A and 1C. Upper division requirements: Bacteriology 102, 103, a the remainder of the units chosen from the following courses: Bacteriology 105, 10 107, and 199. Recommended: Chemistry 102, 114, 115.

A *teaching minor* is not offered in bacteriology.

### Lower Division Courses

**1. General Bacteriology** (4) I, II

An introduction to bacteriology. Effects of physical and chemical agencies up bacteria; biochemical activities of bacteria; microscopic examination and cultivati of bacteria; the bacteria of air, water, soil, milk and dairy products, other food industrial applications. Introduction to disease-producing bacteria. Two hours of le ture and six hours of laboratory per week. Prerequisite: Chemistry 1A or 2A. (Che istry 1A-1B for minor in bacteriology.)

### Upper Division Courses

**101. General Bacteriology** (4) I, II

Lectures and laboratory work of Bacteriology 1 with additional work to prescribed by the instructor. Prerequisite: Chemistry 1A or 2A. (Chemistry 1A-1B f minor in bacteriology.)

**102. Advanced Bacteriology** (5) I

A survey of the agents of disease and methods of host resistance. Laboratory experience in diagnosis and immunologic techniques. Two lectures and three laboratories per week. Prerequisites: Bacteriology 1 or 101, and Chemistry 101. Recommended: Biochemistry, physiology.

**103. Serology** (4) II

A survey of the principles and techniques used in serological diagnosis of disease agents. The course is planned for students interested in research or laboratory technology. One lecture and three laboratories per week. Prerequisites: Bacteriology 1 or 101, Bacteriology 102, and Chemistry 101. Recommended: Biochemistry, physiology.

**105. Bacterial Metabolism** (2) I (Not offered in 1951-52)

A course to provide a basic knowledge of the principles by which micro-organisms derive energy to support the life processes. Prerequisites: Bacteriology 1 or 101, Chemistry 101. Recommended: Biochemistry, Bacteriology 102 and 103. This course is offered every third semester.

**106. Immunology.** (2) II (Offered in 1951-52)

A lecture course dealing with the factors underlying virulence in microorganisms, and the mechanisms of bacterial infection. Specific and nonspecific antimicrobial immunity; the antigen-antibody reaction; and consideration of the immunochemistry of protein and nonprotein cell substances. Prerequisites: Bacteriology 102, Chemistry 101. Recommended: Bacteriology 107, Chemistry 114. This course is offered every third semester.

**107. Virology** (2) I

A survey of viruses and Rickettsias as agents of disease. An introduction to virological techniques, and routes of infection with further consideration of concepts of epidemiology, diagnosis, pathology, and host-responses. Prerequisite: Bacteriology 102, 103, or equivalent.

**199. Special Study** (1-6) I, II

Work other than is outlined in the regular courses. Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least 15 units of work in the life sciences (including courses in bacteriology) with grades of A or B. No more than six units of Bacteriology 199 may apply toward graduation.

# BIOLOGY

## IN THE DIVISION OF LIFE SCIENCES

Major and minor work are not offered in biology (see botany and zoology); however, courses in biology may be used as part of the general science major for the general junior high school credential, or the general science minor for the general elementary, kindergarten-primary, and special secondary credentials, or the life science minor for the general secondary credential.

### Lower Division Courses

**A. Solution and Dosage** (2) I

Arithmetic review with computing of dosage, percentage of solutions, apothecaries weights. Two hours per week.

**(G)1. Survey of Biology** (3) I, II

A survey of life science with emphasis on the biology of man in relation to modern life. Three lectures per week. If laboratory credit is wanted by the student, Biology 3 should be taken instead of Biology 1; or Biology 1 may be followed by Biology 4. Not open to students with credit for Biology 3, 4, 10A, 10B, 40, Zoology 1A, 1B, Botany 2A, or 2B.

**(G)3. Principles of Biology** (3) I, II

A consideration of basic biological phenomena. Two hours of lecture and thre of laboratory each week. Not open to students with credit for Biology 1, 40, 10A-10B Botany 1 or 2A-2B, or Zoology 1A-1B.

**(G)4. Plant and Animal Types** (3) I, II

An introduction to the major groups of plants and animals with emphasis o local forms. Two hours of lecture and three of laboratory each week. Prerequisite Biology 10A-10B, Botany 1 or 2A-2B, or Zoology 1A-1B.

# BOTANY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in botany for the A.B. degree. Courses i the major are in addition to 45 units in general education courses. Lower divisio requirements: Botany 1 or 2A-2B, Chemistry 1A-1B or 2A-2B. Recommended: German, French or Spanish, Zoology 1A-1B, Bacteriology 1. Upper division requirements A minimum of 24 upper division units, at least 18 units of which must be in botany an six of which may be related courses in bacteriology, chemistry, geology, zoology, selecte with approval of departmental representative.

A *teaching major* is not offered in botany.

### Minor

A *minor in arts and sciences* is offered in botany. The minor must include at leas 15 units of work in botany, or maximum of 22, six units of which must be from course carrying upper division credit.

A *teaching minor* is not offered in botany; however, botany may be used as par of the *general science minor* for the special secondary, the general elementary, and th kindergarten-primary credentials or as part of the *life science minor* for the genera secondary credential. For specific information, refer to these credentials.

### Lower Division Courses

**1. Introduction to Botany** (4) I, II

Designed primarily for students who desire a general acquaintance with th fundamentals of botany. Not open to students who have credit for Botany 2A or 2B but may be used as a prerequisite to upper division courses. Three lectures, and on three-hour laboratory per week.

**2A-2B. General Botany** (4-4) I, II

Year course covering fundamentals of structure, general behavior, morphology and relationship of plants, including an introduction to classification and distribution of seed plants. Two lectures and six hours of laboratory work per week. Botany 2A i a prerequisite for 2B.

**4. California Plants** (2) II (Not offered in 1951-52)

Classification and ecology of representative orders of wild flowers, trees, and chaparral of San Diego region, including practice in the use of keys. One lecture and three hours laboratory per week. Occasional Saturday field trips.

### Upper Division Courses

**102. Mycology** (4) I

A study of the different groups of fungi. Special attention will be given to the parasitic and economic forms, their life history, structure, and classification. Prerequisite: Botany 2B or Botany 1.

**107. Plant Physiology** (4) II

The activities of plants, including food manufacture, absorption, conduction, transpiration, respiration, growth and movement. Two lectures and two laboratory periods per week. Prerequisites: Botany 1 or Botany 2A, and Chemistry 2A-2B or equivalent.

**112. Cultivated Trees and Shrubs** (3) I
Recognition of the common cultivated trees and shrubs of the San Diego region. Trips to local parks and private gardens. One lecture and six hours per week laboratory or field work. Prerequisites: Botany 1, 2A-2B, 4, or equivalent.

**114. Plant Taxonomy** (3) II
Identification, classification and distribution of representative orders of flowering plants. One hour lecture and six hours per week of laboratory and field work. Prerequisites: Botany 1, 2A-2B, or 4.

**119. Field Botany** (4) Summer
Study of the local native vegetation with emphasis on ecological units within floristic areas. Field trips to be supplemented with laboratory work in herbarium procedure.

**126. Plant Pathology** (3) II
A practical course dealing with the principles of disease in plants, control measures, and quarantine procedures. Emphasis is placed on the determination and control measures of those pathogenic organisms which affect crops, trees and shrubs and nursery stock. Two lectures and one laboratory period per week. Prerequisite: Botany 1 or 2A-2B and 102.

**(G)150. Readings in Biology** (2) II
Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles,, ecology, economic zoology, zoogeography, breeding habits and animal behavior. Not open to students with credit for Zoology 150.

**153. Economic Biology** (2) I
Study of the uses of plants and animals to man and the ways in which they injure him and his possessions. Consideration is also given to general methods of control and conservation. Prerequisites: Zoology 1A, Biology 1, Biology 4, Botany 1, or Botany 2A-2B. Not open to students who have credit for Zoology 153.

**155. Genetics** (3) II
Principles of plant and animal genetics, with experiments and demonstrations illustrating the mechanisms of heredity. Two hours of lecture and three hours of laboratory per week. Not open to students with credit for Zoology 155. Prerequisites: Biology 3 and 4, Zoology 1A-1B, or Botany 2A-2B.

**(G)160. Evolution** (2) II
The development of theories of evolution. Two lectures per week. Not open to students with credit for Zoology 160.

**162. Agricultural Botany** (2) I
A study of California crop plants, their general identification, cultural methods, and regional distribution. Field trips to be arranged. Prerequisite: Botany 1 or Botany 2A-2B.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**199. Special Problems** (1-3) I, II
Work other than is outlined in the above courses. Admission by permission of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open only to students who have completed at least 15 units of botany with a grade A or B. No more than six units of Botany 199 may apply toward graduation.

## Graduate Courses

**298. Special Study** (1-6)
An individual study course designed primarily for candidates for advanced degrees.

# BUSINESS COURSES

## IN THE DIVISION OF BUSINESS

The Division of Business consists of three departments: Accounting and Bus ness Management; Marketing; and Business Education, Secretarial and Office Mar agement. For complete descriptions of the major in business with the various fields c specialization, refer to these departments or to the business curricula in the sectio of the bulletin entitled: Preprofessional and Vocational Curricula.

All courses in business offered by the three departments in the Division c Business are listed below.

### Lower Division Courses

**A. Business Mathematics** (1) I, II

A practical course in the mathematics of business. A thorough study of interes compound interest, discount, insurance rates, etc.

**1A-1B, Typewriting** (3-3) Year, I

Development of a command of a keyboard, acquisition of speed and the artisti arrangement of typewritten material with special reference to commercial forms, tabu lation and billing. (1A is a prerequisite for 1B.)

**2. Mathematics of Finance** (3) I, II

Interest and annuities; amortization; sinking funds; valuation of bonds; depre ciation; mathematics of building and loan associations. Prerequisites: Two years c algebra in high school, or equivalents.

**2A. Personal-Use Typewriting** (3) I, II

A short course designed for those not wishing to enter the business office bu desiring a knowledge of or skills in the use of the typewriter. Five hours laborator practice.

**3A. Office Machines: Rotary Calculator** (1) I, II (1st six weeks of semester)

A six-weeks course designed to teach students the operation of the rotary calcu lator. Operations basic to statistics, accounting, and other areas needing this skill wi be stressed.

**3B. Office Machines: Key-Driven Calculator** (1) I, II (2d six weeks of semester

Same as 3A, except the key-driven calculator is substituted for the rotary calcu lator.

**3C. Office Machines: Printing Calculator** (1) I, II (3d six weeks of semester

Same as 3A, except the printing calculator is substituted for the rotary calculato

**4. Introductory Typewriting** (1) I, II

A short, introductory course building the fundamentals of typing in a six-week period. Students enroll for the first six weeks, the second six weeks, or the third si weeks in a semester. Not open to Business Education or Secretarial majors.

**5A-5B. Shorthand** (5-5) Year, I

An intensive course designed for the practical preparation of office secretaries A thorough study of the Gregg System. Development of the ability to read and writ shorthand rapidly and correctly, both literary and commercial. The shorthand spee necessary to pass a civil service examination is attained by the end of the year. (5A i a prerequisite for 5B.)

**6A-6B. Advanced Shorthand** (3-3) Year, I

Development of speed in writing and transcription. Advanced dictation on lette forms, legal forms, speeches, and literary and technical material. Prerequisite: Busi ness 5A-5B or equivalent. (6A is a prerequisite for 6B.)

**8. Business Communication** (3) I, II

A course designed to give training in writing as a means of solving moder business problems. Prerequisites: English 1 and Business 2A or its equivalent.

**4A-14B. Principles of Accounting** (3-3) I, II

The balance sheet; profit and loss statement; the opening, conducting, and closing f books for different kinds of businesses; organizations, reorganizations, dissolutions, nd consolidations, etc., keeping in view the best modern accounting practice. Five ours lecture and laboratory. (14A is a prerequisite for 14B.)

**8A-18B. Business Law** (3-3) I, II

The fundamental principles of business law. Cases showing the actual application of the principles to commercial and business transactions. The subjects covered: ontracts, sales, agency, negotiable instruments, insurance, and wills. Either semester nay be taken first.

**G)20. Consumer Problems** (3) II

Consumer incomes; bases of consumer choice-making; practical problems of uying food, clothing, shelter, transportation, insurance, etc.; family budgeting; market tructure and functions seen from the consumer's point of view. Not open to students vith credit for Business 120. A general education course in family life education.

**1. Organization and Management of Small Business** (3) I

Problems confronting the small business man with regard to finance, organization, nanagement. Reasons for failures and success in small business. Specific study of arious kinds of small businesses.

**4. Retailing** (3) I, II

Study of retail stores, emphasizing the problems of store managers and merhandising executives; store location, organization, personnel, sales promotion, buying nd handling of merchandise, inventory, turnover, and control methods. Problems of rofitable operation under changing conditions.

**5. Salesmanship** (3) I, II

Theoretical and psychological backgrounds of salesmanship, newer concepts of elling; the selling of ideas and services; steps in a sale: Attention, interest, desire, losing; the development of clienteles and of good will; the personal factor in salesnanship.

**6. Applied Salesmanship** (2) II

Practice in selling; supervised work in cooperating stores, or outside selling; elationships between theory and practice. Prerequisite: Business 25 and permission f instructor.

**7. Advertising Principles** (3) I, II

Advertising as a sales promotional tool in marketing activities; consumer, narket and product analysis; advertising media; preparation of advertisements; neasurement of advertising effectiveness; economic and legal aspects of advertising; ublic relations; advertising campaigns.

**5A-65B. Record Keeping.** (1-3 each semester) Year, II

Application of accounting practice and principles to accounting practice; the echnical arrangement of accounting forms, records and reports found in business. Prerequisite: Business 14A. Business 65A is a prerequisite for 65B.

## Upper Division Courses

**103A. Office Management** (3) I, II

A study of the functions of the office, duties of the office manager, organization f the office, communication functions, physical facilities involved, personnel relationhips of management and worker, and the controls necessary for efficient output.

**105A. Office Systems** (3) I, II

A course designed to develop fundamental skills in the figuring and bookkeeping machines used in offices, together with their interrelating functions as these affect office systems.

**105B. Office Systems** (3) I, II

The relationship of voice-writing, addressing, and duplicating machines to office procedures and routines is studied and skills developed in these areas of use.

**108. Records Management** (3) I, II

Intensive survey of the various means of preparing, keeping, storing, and disposing of office records to facilitate the efficient management of business. Various system of records management will be studied together with the equipment and supplie required.

**113A-113B. Secretarial Office Practice** (5-5) Year, I

Practice in the duties and routines of office work as required of the stenographe and secretary with special emphasis on the shorthand dictation and transcriptio problems arising in various types of offices. Prerequisite: Business 1A-1B, 5A-5B, o their equivalent.

**118A-118B. Advanced Commercial Law** (3-3) Year, I, II

An advanced study of the law of personal and real property, partnership, corporation and the laws regulating trade and trade practices and competition. Electiv for business majors.

**120. Consumer Income Management** (3) I

Functions and responsibilities of consumers; problems of choice-making; planning expenditures for housing, household operation, insurance and investments. Economics of installment buying, borrowing procedures, control of frauds, legislatio affecting consumers. Not open to students with credit for Business 20.

**121. Business Administration** (3) I, II

Problems of business administration as an interrelated whole. A discussion of th problems of the business administrator with particular reference to the character o the problems involved and to the control policies and devices of the manager. Prerequisite: Economics 1A-1B.

**123. Marketing Principles** (3) I, II

Study of marketing functions; activities of producers, wholesalers, retailers anc other middlemen; channels of distribution; integration of marketing activities; pric policies; government regulation. Prerequisite: Economics 1A-1B.

**124. Marketing Administration** (3) II

An advanced course dealing with practical aspects of marketing. Solutions o problems faced by producers, wholesalers, retailers and other middlemen in the marketing of their products. Prerequisite: Business 123.

**125. General Insurance** (3) I

Economic theory of risk; transfer of risk; distribution and prevention of loss; types of insurance carriers; problems of rate making; the insurance contract; coverages; special forms of life, fire, marine and casualty insurance; state supervision.

**126. Casualty Insurance** (3) II

The nature and reasons for existing practices in compensation and casualt insurance. The social and legal bases of insurance, fundamental principles of rat making, policy provisions, state regulation and state insurance. Prerequisite: Business 125.

**127A. Life Insurance—Principles and Practice** (3) I

Types of life insurance companies and associations, home office and agenc organization, types of contracts, surrender value, policy loans and extended insurance surplus and dividend policies, reserves, group, industrial and social insurance, anc state supervision.

**127B. Life Insurance Salesmanship** (3) II

Special problems of life insurance selling, with emphasis on the psychologica aspects of insurance selling, on specific techniques for finding prospects, for managing the sales interview. For students interested in life insurance selling, and those planning to obtain life underwriter's certification.

**128A-128B. Advanced Life Insurance** (3-3) Year, I

An advanced course in life insurance. The emphasis is on preparation for the C. L. U. Certificate. 128A is a prerequisite for 128B.

**28C-128D. Advanced Life Insurance** (3-3) I

Prepares the student for Part D of the Chartered Life Underwriters examination howing how life insurance strengthens banking credit, financial structure of corporaions, and partnerships; also, life insurance as an investment. Business 128C is a rerequisite for Business 128D.

**28E-128F. Advanced Life Insurance** (3-3) Year, I

Prepares for part of the Chartered Life Underwriters examination. Covers the our sections, "Life Insurance Fundamentals," "General Education," "Law, Trust nd Taxes," and "Finance"; teaches proficiency in the analysis of cases or problems. usiness 128E is a prerequisite for Business 128F.

**33. Corporation Finance** (3) I

The corporate form of organization, instruments of long-time finance, methods of aising capital, efficient financial management, the financing of reorganizations, and overnmental control. Prerequisite: Economics 1A-1B. Not open to students who have redit for Economics 133.

**34. Investments** (3) II

Investment principles and practices with emphasis upon problems of the small nvestor, such as tests of a good investment, sources of information, types of stocks and onds, mechanics of purchase and sale, investment trusts, real estate mortgages, and he like.

**37. Credits and Collections** (3) I

The credit man and his work, including the instruments with which he works, ources of credit information, the technique of his department, collection methods, egislation for the protection of debtor and creditor, and credit insurance.

**53. Personnel Management** (4) I, II

Problems in the management of personnel relations, including techniques of electing, training, supervising and rating employees. Methods used by management a job evaluation; wage and salary payment plans; employee services; health and afety; union relationships; stimulation of interest.

**54. Wage and Salary Administration** (3) II

Problems of job analysis; major techniques of job evaluation, including ranking, lassification, point system, factor comparison; problems of wage and salary adminisration, incentive pay methods; merit rating plans. Not open to students with credit or Political Science 146.

**60A-160B. Advanced Accounting** (3-3) Year, I

An intensive study of the corporation, its accounting and financial problems; a horough study of the balance sheet; depreciation; factory accounting, etc. Preequisite: Business 14A-14B. (160A is a prerequisite for 160B.)

**61A-161B. Cost Accounting** (3-3) Year, I

Principles and methods of cost accounting in the mercantile establishment and n the factory. A study of industrial accounting procedure, the forms used, and their pplication to practical problems. 161A is a prerequisite for 161B.

**62. Accounting Systems** (3) I

The accounting systems used in various types of business and financial concerns. ome practice in devising and installing systems. Prerequisite: Business 14A-14B.

**63. Financial Statements** (3) II

The construction, composition, analysis and interpretation of accounting reports ith particular emphasis on the form, content and phraseology of reports. Preequisite: Business 160A-160B.

**64A-164B. Income Tax Procedure** (3-3) Year, I

A study of the laws and a consideration of the problems arising from state and ederal income, inheritance and corporation tax. 164A is a prerequisite for 164B.

**65A-165B. Auditing** (3-3) Year, I

The fundamental principles of accepted procedures of auditing and related types f accounting engagements. 165A is a prerequisite for 165B.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**167. Governmental Accounting** (3) II
A comparative study of accounting systems used by municipalities, counties, an the State of California; detailed comparisons with commercial practice; procedures i handling budget accounts, appropriations, and encumbrances; subsidiary records; co records; internal checks; auditing.

**169. C. P. A. Review** (3) II
An intensive review of the accounting principles and procedures covered in th accounting theory and accounting practice sections of the uniform C. P. A. examin tion prepared by the American Institute of Accountants. Prerequisite: Busines 160A-160B, 161A-161B, 164A-164B, 165A-165B, 167.

**181. Radio Sales and Advertising** (3) I, II
A study of advertising trends in radio advertising; time buying, audience surve and program types in relation to products to be advertised via radio broadcastin Includes publicity and promotion of radio programming organization of a radio station relationship between the business and entertainment factors of radio broadcastin Prerequisite: Consent of the instructor. Not open for credit to students with cred in Speech Arts 181.

**184. Sales Management** (3) I
Consideration of problems confronting the modern sales executive; selectio training, compensation and control of the sales force; sales analysis; sales quotas sales costs and budgets; market and product research and analysis; coordination personal selling with other form of sales effort.

**185. Advertising Copy and Layout** (2) II
Introduction to principles and techniques of copy writing; types of copy preparation of layouts; mechanical methods employed by the artist, engraver an printer; legislation and regulations affecting advertising claims. Prerequisite: Bus ness 27, or permission of instructor. Not open to students with credit for Journa ism 185.

**186. Store Management** (2) II
Retail locations, buildings, layouts and fixtures; store supplies and maintenance receiving, marking, storing, wrapping and delivering merchandise; customer servic adjustments, credit and collections; expense control. Prerequisite: Business 24, permission of instructor.

**187A. Buying Techniques** (2) I
Buying for department and specialty stores; customer demand; function bureaus that aid in buying; stock plans; merchandise resources; foreign buying trading techniques; terms and discounts; credit and shipping terms; the regulati of trade practices. Prerequisite: Business 24, or permission of instructor.

**187B. Merchandising Techniques** (2) II
Methods of dollar and unit control in retail stores; pricing, turnover, invento methods and control; legislation; budgets; arithmetic of merchandising; profitabilit of specific methods of merchandising. Prerequisite: Business 24, or permission of i structor.

**188. Advertising Media** (2) I
A thorough coverage of advertising media. Market characteristics; rates a sources of information; evaluation of media; problems of coverage, duplication, cos and scheduling; advertising salesmanship. Prerequisite: Business 27, or permissio of instructor.

**89. Advertising Problems** (3) I
Principles of advertising applied to the solution of actual advertising problems ncountered by business firms. Estimating opportunities for effective use; promotional ampaigns; selection of media, retail advertising, national advertising, advertising gencies; advertising services of publishers. Prerequisite: Business 27, or permission f instructor.

**90. Objectives and Curricula in Business Education** (3) II
A study of the objectives of business education and a detailed analysis of the actors involved in the construction of a business curriculum.

**96. Work Experience** (2) I, II
Supervised work in cooperating stores or offices; relationship between theory nd practice in specific business conditions. Prerequisite: Permission of instructor.

**98A-198B. Investigation and Report** (1 to 3 each semester) I, II
A comprehensive and an original study of a problem connected with business nder the direction of one or more members of the business staff. Prerequisite: Senior tanding and permission of the instructor. 198A is a prerequisite for 198B.

**99. Special Study** (1-3) I, II
An individual study course. Maximum credit six units.

### Graduate Courses

**00. Readings in Current Literature in Business Education** (2) I
Specialized reading in one or more phases of business education, followed by a iscussion and written report of the value of each article read.

**03. Office Management** (2)
An intensive study of the problems of office management and their solution. The elation of records, reports, budgets and manuals to managerial control. Prerequisites: usiness 14A-14B, 103A.

**13. Problems in Business Education** (2) II
Designed to fit the needs of individual students and their problems through the vriting of research papers, of a term or individual study nature. The studies to be made vill cover the principles of good teaching, trends in Business Education, current iterature.

**21. Basic Business Education** (2)
An introduction to the content and methodology of teaching basic Business Eduation.

**23. Problems of Distributive Business** (2)
Critical analysis of distributive business problems in the light of changing ecoomic, social and governmental conditions. Prerequisite: Business 121, 123.

**33. Administration and Supervision of Business Education** (2) I
Designed to provide students who hold, or who expect to hold, administrative posiions in Business Education with the techniques necessary for successful executive work.

**260. Advanced Problem Analysis** (Accounting) (2)
The study of conditions causing various accounting problems with special emphais upon the theory and practices involved in their solution. Prerequisite: Business 160A-160B, 161, 165.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)
An individual study course designed primarily for candidates for the master's degree.

**299. Thesis or Problem** (3)
Guidance in the preparation of a project or thesis for the master's degree.

# BUSINESS EDUCATION, SECRETARIAL AND OFFICE MANAGEMENT

## IN THE DIVISION OF BUSINESS

### Major

A *major in arts and sciences* is offered in *business* for the A.B. degree. Stude majoring in this department, with business as the major, may specialize in one of following subfields: (A) *Business Education*, (B) *Office Management*, or ( *Secretarial*. Courses in the major are in addition to 45 units in general educat courses. A minor in some field other than business is required of all majors in t department.

The student must complete requirements in one of the following fields of spec ization:

A. **Business Education:** Lower division requirements must include Busin 1A-1B, 8, 14A-14B, and 18A-18B, plus the requirements in one of the following s fields: (1) *Accounting:* Nine units selected from Business 2, 21, 24, 25, 27. ( *Accounting-Secretarial:* Business 5A-5B (If student has the equivalent of 1A-1B 5A-5B, must select nine units in consultation with adviser). (3) *Merchandising:* Bu ness 24, 25, 27. (4) *Secretarial:* Business 5A-5B (If student has the equivalent of 1B or 5A-5B, must select nine units in consultation with adviser).

Upper division requirements: Business 103A, 105A-105B, 108, and 190, plus requirements in one of the following subfields: (1) *Accounting:* Business 121, 16 164A. (2) *Accounting-Secretarial:* Business 121, 160A, 164A, or 113A-113B. ( *Merchandising:* Business 121, and seven units selected from Business 185, 186, 18 187B, Art 107. (4) *Secretarial:* Business 113A-113B.

B. **Office Management:** Lower division: Business 2, 8, 14A-14B, and 1 18B. Upper division: Business 103A, 105A-105B, 108, 121, 137, 153, 154, 160A, 16 and Economics 140.

C. **Secretarial:** Lower division: Business 1A-1B, 5A-5B, 8, 14A-14B, 18A-18B. Upper division: Business 103A, 105A-105B, 108, 113A-113B, 153, and 16

A *teaching major in business education* is offered for the special secondary general secondary school credentials. For statement of requirements, refer to th credentials.

### Minor

A *minor in arts and sciences* is offered in *business* with specialization in one the subfields listed under the major above. The minor consists of a minimum of units, or maximum of 22, six units of which must be in upper division courses selec from one of the subfields listed under the major above. Business 1A-1B or Econom 1A-1B and Business 14A-14B.

A *teaching minor in business education* is offered for the special secondary general secondary school credentials. For statement of requirements, refer to th credentials.

### Courses in Business Education, Secretarial and Office Management

All business courses in this department for the major or minor are listed in t section of the bulletin under Business.

# CHEMISTRY

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in chemistry for the A.B. and for the B degrees. Courses in the major are in addition to 45 units in general education cours These curricula are outlined below.

A *teaching major in physical science and general science* is offered for the gene secondary school credential and a *teaching major in general science* is offered for general junior high school credential. For statement of requirements, refer to th credentials.

### Minor

A *minor in arts and sciences* is offered in chemistry. The minor consists of a inimum of 15 units, or maximum of 22, six units of which must be in courses carry-g upper division credit. Chemistry 1A-1B, or its equivalent, must be included in the inor.

A *teaching minor in physical science and general science* is offered for the general condary, special secondary, general elementary, and kindergarten-primary credenals. For statement of requirements, refer to these credentials.

### Curricula for Chemistry Majors in Arts and Sciences

The curriculum outlined below for the B.S. degree is based upon the recomendations of the Committee for Professional Training of Chemists of the American hemical Society. It qualifies graduates for many types of positions as chemists and rovides the training required by most universities for admission to graduate work in iemistry. This department is on the approved list of the American Chemical Society. tudents may also arrange a program which leads to the A.B. degree and meet the commendations of the American Chemical Society and the requirements of most niversities for admission to graduate work in chemistry.

The final curriculum outlined below for the A.B. degree is designed for students ho do not intend to become professional chemists, but who desire the major in chemtry as part of a general education or in preparation for training in a related profeson. By proper choice of electives, graduates can meet the requirements for admission medical schools. The sequence of courses listed below represents the minimum chnical requirement for an A.B. degree with a major in chemistry. A minor is quired of chemistry majors taking this degree.

### Plan for B.S. Degree and Certificate of the American Chemical Society

| *irst year* | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| Chemistry 1A-1B | 5 | 5 |
| Physics 4A | – | 4 |
| Mathematics 3A-3B | 3 | 3 |
| * Health Education 21 | 2 | – |
| * Psychology 1 | – | 3 |
| * Biology 1 or 3 | 3 | – |
| * English 1 | 3 | – |
| * P. E. activity | ½ | ½ |
| | 16½ | 15½ |

| *Second year* | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| Chemistry 5A-5B | 4 | 4 |
| Physics 4B-4C | 4 | 4 |
| Mathematics 4A-4B | 3 | 3 |
| †* German 1, 2 | 3 | 3 |
| * Speech Arts 3 | 2 | – |
| * Social Science | – | 3 |
| * P. E. activity | ½ | ½ |
| | 16½ | 17½ |

| *hird year* | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Chemistry 101-102 | 4 | 3 |
| Chemistry 103 | – | 3 |
| Chemistry 110A-110B | 3 | 3 |
| † German S3-S4 | 3 | 3 |
| * Social Science | 3 | 3 |
| * Lit., Phil., and Arts | 3 | – |
| | 16 | 15 |

| *Fourth year* | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Chemistry 111 | – | 3 |
| ‡ Advanced Chemistry | 9 | 8 |
| * Lit., Phil., and Arts | 3 | – |
| Electives | 4 | 4 |
| | 16 | 15 |

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* General education courses (nine units of chemistry and physics counted toward attern requirements in general education).

† The B.S. degree may be obtained without the Certificate of the American Chemial Society by substituting for the German courses, six units of general education ourses and six units of electives.

‡ Must include four units lecture and one unit laboratory in chemistry courses reuiring three full year-courses in chemistry as prerequisites. Remainder may include ourses in related subjects by approval of department.

## Plan for A.B. Degree and Certificate of the American Chemical Society

| First year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Chemistry 1A-1B | 5 | 5 |
| Physics 4A | – | 4 |
| Mathematics 3A-3B | 3 | 3 |
| * Health Education 21 | 2 | – |
| * Psychology 1 | – | 3 |
| * Biology 1 or 3 | 3 | – |
| * English 1 | 3 | – |
| * P. E. activity | ½ | ½ |
|  | 16½ | 15½ |

| Second year | Units 1st Sem. | 2 Se |
|---|---|---|
| Chemistry 5A-5B | 4 |  |
| Physics 4B-4C | 4 |  |
| Mathematics 4A-4B | 3 |  |
| †* German 1, 2 | 3 |  |
| * Speech Arts 3 | 2 |  |
| * Social Science | – |  |
| * P. E. activity | ½ |  |
|  | 16½ | 1 |

| Third year | 1st Sem. | 2d Sem. |
|---|---|---|
| Chemistry 101-102 | 4 | 3 |
| Chemistry 103 | – | 3 |
| Chemistry 110A-110B | 3 | 3 |
| † German S3-S4 | 3 | 3 |
| * Social Science | 3 | 3 |
| * Lit., Phil., and Arts | 3 | – |
|  | 16 | 15 |

| Fourth year | 1st Sem. | 2 Se |
|---|---|---|
| Chemistry 111 | – |  |
| ‡ Chemistry electives | 2 |  |
| Minor (U. D.) | 6 |  |
| * Lit., Phil., and Arts | 3 |  |
|  | 14 | 1 |

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* General education courses (nine units of chemistry and physics counted towa pattern requirements in general education).

† The A.B. degree may be obtained without the Certificate of the American Che cal Society by substituting for the German courses, six units of general education cour and six units of electives.

‡ Must include four units lecture and one unit laboratory from courses requiri three full year-courses in chemistry as prerequisites.

## Plan for A.B. Degree for Related Professions

| First year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Chemistry 1A-1B | 5 | 5 |
| * Physics 2A-2B | 3 | 3 |
| * Physics 3A-3B | 1 | 1 |
| * Mathematics 7A-7B | 3 | 3 |
| * English 1 | 3 | – |
| * Psychology 1 | – | 3 |
| * P. E. activity | ½ | ½ |
|  | 15½ | 15½ |

| Second year | Units 1st Sem. | 2 Se |
|---|---|---|
| Chemistry 5A-5B | 4 |  |
| †* French or German | 3 |  |
| * Speech Arts 3 | 2 |  |
| * Health Education 21 | – |  |
| * Biology 1 or 3 | 3 |  |
| * Lit., Phil., and Arts | – |  |
| Elective | 3 |  |
| * P. E. activity | ½ |  |
|  | 15½ | 1 |

| Third year | 1st Sem. | 2d Sem. |
|---|---|---|
| Chemistry 101-102 | 4 | 3 |
| Chemistry 103 | – | 3 |
| Chemistry 110A-110B | 3 | 3 |
| * Social Science | 3 | 3 |
| * Lit., Phil., and Arts | 3 | – |
| * Elective | 3 | – |
| Minor | – | 3 |
|  | 16 | 15 |

| Fourth year | 1st Sem. | 2 Se |
|---|---|---|
| Chemistry 111 | – |  |
| Chemistry electives | 3 |  |
| * Social Science | 3 |  |
| Minor | 3 |  |
| Electives | 7 |  |
|  | 16 | 1 |

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* General education courses.

† Six units of general education courses may be substituted for the French German.

## Lower Division Courses

**1A-1B. General Chemistry** (5-5) Year, I, II
General principles of chemistry with emphasis on inorganic materials. Three lectures and six hours of laboratory per week. Qualitative analysis is included in the second semester. Prerequisites: Elementary algebra and plane geometry. Recommended: High school chemistry, physics, and additional mathematics.

**(G)2A-2B. Fundamentals of Chemistry** (3-3) Year, I
A general course including inorganic, organic, and biological chemistry for students not intending to take further work in chemistry. Emphasis is placed on applications of chemistry to everyday life. Two lectures and one laboratory period per week. Not open to students with credit for Chemistry 1A-1B.

**5A. Elementary Quantitative Analysis** (4) I
Theoretical consideration of the principles of gravimetric and volumetric analysis. Practice in standardizing reagents and analyzing samples. Two lectures, and two laboratory periods per week. Prerequisite: Chemistry 1A-1B, and facility in the use of logarithms and slide rule.

**5B. Quantitative Analysis** (4) II
Further work in the theory and practice of volumetric and gravimetric analyses and the study of electro analytical methods. Two lectures and two laboratory periods per week. Prerequisite: Chemistry 5A.

## Upper Division Courses

**101. Introductory Organic Chemistry** (4) I
An introductory study of the chemistry of carbon compounds, both aliphatic and aromatic. The laboratory work illustrates properties and reactions of typical compounds and stresses development of technique. Three lectures and one laboratory period per week. Prerequisite: Chemistry 1A-1B.

**102. Organic Chemistry Laboratory** (3) II
Synthesis of typical aliphatic and aromatic compounds. Study of the theory and practice of laboratory operations. Approximately the last third of the course is devoted to the systematic qualitative analysis of organic compounds. Three laboratory periods per week. Prerequisite: Chemistry 101.

**103. Intermediate Organic Chemistry** (3) II
A continuation of Chemistry 101. Further study of types of aliphatic and aromatic compounds, their derivatives and interrelationship. Introduction to mechanisms of organic reactions. Three lectures per week. Prerequisite: Credit or registration in Chemistry 102.

**105. Advanced Quantitative Analysis** (4) II
Advanced work in the theory and practice of volumetric, gravimetric, and electroanalysis. Prerequisite: Chemistry 5A. Not open to students with credit for Chemistry 5B.

**110A-110B. Physical Chemistry** (3-3) Year, I
Theoretical principles of chemistry with emphasis on mathematical relations. Three lectures per week, problems and reports. Prerequisites: Physics 2A-2B, or equivalent; Math. 4B, or equivalent; Chemistry 5A-5B.

**111. Physical Chemistry Laboratory** (3) I, II
Physico-chemical apparatus and measurements, with emphasis on technical report writing. Discussion period and three laboratory periods per week. Prerequisite: Chemistry 110B, or concurrent registration with permission of the instructor.

**114. Biochemistry** (3) I
The chemistry of carbohydrates, fats, proteins, enzymes, vitamins and hormones. Nutrition, intermediary metabolism and chemotherapy are discussed. Three lectures per week. Prerequisite: Chemistry 103 or by permission of the instructor. Recommended: Elementary biology or zoology.

**115. Biochemistry Laboratory** (2) II
Laboratory work in the testing, synthesis, isolation and analysis of biochemi
materials. Chemical rather than biological considerations are emphasized. Two labo
tory periods per week. Prerequisites: Chemistry 5A and credit or registration
Chemistry 114. Recommended: Chemistry 155.

**116. Clinical Chemistry** (3) II
Lectures and laboratory work on the chemical composition of blood, urine, m
and body tissues. One lecture per week and two laboratory periods per week. *O*
*primarily* to students enrolled in the Laboratory Technician Curriculum. Prerequisi
Chemistry 115.

**118. Colloid Chemistry** (2) II (Offered 1951-52 and alternate years)
The theoretical principles of colloid chemistry and the preparation, propert
and practical applications of colloids. Two lectures per week. Prerequisite: Chemis
101, 110A and 110B.

**122. Glass Blowing** (1) II
Elementary training in the manipulation of glass. Prerequisite: Chemis
1A-1B. One laboratory period per week.

**127. Advanced Inorganic Chemistry** (3) II
(Offered 1952-53 and alternate yea
A lecture course dealing with such topics as the physical basis of the perio
system, complex inorganic compounds, and the nature of the chemical bond. Th
lectures per week. Prerequisite: Three years of chemistry.

**144A-144B. Principles of Chemical Engineering** (3-3) Year, I
(Offered 1952-53 and alternate yea
Industrial stoichiometry, flow of fluids, heat transfer, unit processes and ty
of industrial equipment. Three lectures per week, problems and reports. Prerequisi
Credit or registration in Chemistry 110A-110B.

**154. Organic Qualitative Analysis** (3) II
A systematic study of the identification of organic compounds and mixtur
One lecture and two laboratory periods per week. Prerequisite: Chemistry 5B or 1
102 and 103.

**155. Instrumental Methods of Analysis** (3) I
Theory and practice of modern methods of instrumental analysis, including
of pH meters, colorimeters, spectro-photometers, and other analytical devices. Disc
sions, reports, field trips, special individual projects. One lecture and two laborat
periods per week. Prerequisite: Three year-courses in chemistry.

**199. Special Problems** (1-3) I, II
Supervised individual work in specialized branches of chemistry. Admission o
by consent of instructor. Hours of credit to be arranged in each case. Open only
students who have shown ability to do A or B work in chemistry. Maximum cre
six units.

## Graduate Courses

**200. Seminar** (2-2) I, II
An intensive study of some phase of advanced chemistry.

A. Advanced Organic Chemistry
B. Chemical Kinetics
C. Chemical Thermodynamics
D. Molecular Structure
E. Electrochemistry
F. Advanced Biochemistry
G. Spectrographic Analysis
H. Photochemistry
I. History of Chemistry

**290. Bibliography** (1) I, II
Exercise in the use of basic reference books, journals, and specialized bi
ographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3) I, II
An individual study course designed primarily for candidates for the maste
degree.

**299. Thesis** (3) I, II
Guidance in the preparation of a project or thesis for the master's degree.

# COMPARATIVE LITERATURE

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is not offered in comparative literature; however, ourses in this field may be used as part of the English major in arts and sciences. For pecific information, refer to English.

A *teaching major* is not offered in comparative literature; however, courses in is field may be used as part of the teaching major in English for the general secondary nd general junior high school credentials with the approval of the departmental representative. For specific information, refer to the outlines of requirements for these redentials.

### Minor

A *minor in arts and sciences* is offered in comparative literature. The minor must clude at least 15 units of work in comparative literature, nine units of which must be om courses carrying upper division credit.

A *teaching minor* is not offered in comparative literature; however, courses in is field may be used as part of the teaching minor in English for the general secndary, the special secondary, the general elementary, and the kindergarten-primary redentials. For specific information, refer to the outlines of requirements for these redentials.

### Lower Division Courses

**G)52A-52B. Masterpieces of World Literature** (3-3) Year, I

A chronological survey from Homer to modern times. The first semester stresses e classical epic and tragedy. The second semester, beginning with the Renaissance, resses prose fiction, the drama, and the essay. Not open to students with credit for nglish 52A-52B.

### Upper Division Courses

**G)101A. Modern Continental Fiction** (3) II

A survey of leading French, Russian, Scandinavian, Italian, and German novelts and short story writers, from Tolstoy and his associates to the present day.

**G)115. The Bible as Literature** (3) I

A study of the narrative, poetry, and prophecy of the King James version of the ible. Readings, reports, lectures, and discussions.

**G)138. Introduction to Aesthetic Appreciation** (1) I

Major forms of expression and aesthetic experience in art, music and literature, resented by an interdepartmental staff through lectures, demonstration, and panel iscussions. Not open to students with credit for Aesthetics 138.

**G)140A-140B. Masterpieces of French Literature** (3-3) Year, I
(Offered in 1951-52)

A cultural course designed to be given in introduction to the great French works om the Song of Roland through Cyrano de Bergerac, with emphasis on the 16th, 17th, 8th and 19th century authors. The contributions to world thinking of Rabelais, Monigne, Moliere, Racine, Descartes, Pascal, Montesquieu, Voltaire, Rousseau, Hugo, alzac, Flaubert, Maupassant, Zola, will be studied through lectures and outside adings.

**G)142. The Golden Age of German Literature** (3) II

Masterpieces of German Literature from the 18th and early 19th centuries. nglish translations read. No knowledge of German required.

**G)152A-152B. Survey of Drama** (3) Year, I

Study of selected tragedies and comedies from Asiatic, European, English, and merican literature, with emphasis upon the human problems depicted therein and pon the timelessness of certain themes, such as those of Electra and Medea. Lectures, scussions, and reports on readings. Not open to students with credit for English 2A-152B.

**159. The Rise of Romanticism in European Literature** (3) II
Continental origins and growth of the romantic movement. Studies in the worl of Rousseau, Goethe, Schiller, Lessing, Chateaubriand, Mme. de Stael, and others.

**199. Special Problems** (1-3) I, II
Students who have demonstrated ability in literary studies may enroll for wo other than is outlined in the regular courses. Admission only by consent of the instru tor with whom the work is to be done. Maximum credit, six units.

# ECONOMICS
## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *economics* for the A.B. degree. Cours in the major are in addition to 45 units in general education courses. Lower divisi requirements: Economics 1A-1B; Business 14A-14B. Upper division requirement 24 units in economics to include Economics 100A or 100B and 140. Six of the 24 uni may be in related fields, selected with the approval of the departmental adviser. minor is required.

A *teaching major in social sciences* is offered for the general secondary and ge eral junior high school credentials. For a description of these majors, refer to t credentials. Assistance in selection of economics courses as part of the social scien majors may be obtained by consulting with an adviser in the Economics Departme

### Minor

A *minor in arts and sciences* is offered in *economics*. The minor consists of minimum of 15 units, nine units of which must be in courses carrying upper divisi credit.

A *teaching minor in economics* is offered for the general secondary school crede tial or as part of the *social science minor* for the special secondary, general elementar and kindergarten-primary credentials. For a statement of requirements, refer to the credentials.

### Lower Division Courses

**(G)1A-1B. Principles of Economics** (3-3) Year, I, II
The basic principles of economics: Business organization and production; mone credit and banking, depression problems; prices, competition, and monopoly; inco distribution; public finance; international trade; economic systems. Aims of cours Foundation for further study, business pursuits, and intelligent economic citizenshi Prerequisite: 1A prerequisite for 1B.

### Upper Division Courses

**100A. Intermediate Economic Theory** (3) I
Advanced economic theory with special reference to value and distribution, t income approach and full employment policy. Prerequisite: Economics 1A-1B.

**100B. Intermediate Economic Theory** (3) II
Advanced economic theory with special reference to the application of econo theory to national and local economic problems. Prerequisite: Economics 1A-1B.

**(G)102. Comparative Economic Systems** (3) II
The economic aspects of laissez-faire and regulated capitalism, cooperativ socialism, communism, nazism, fascism. Experience in Russia, Germany, Unit States, Great Britain. Criteria for evaluating economic systems. The individual a government in each system. Planning in a liberal capitalistic society.

**05. Economics of Consumption** (3) I (Not offered in 1951-52)

An analysis of the determination of consumer demands, the relationship of the onsumer to the price system, the effects of consumption and saving upon income and mployment, the effects of monopoly and advertising upon consumers' welfare.

**10. Economic History of Europe** (3) I

A general survey of economic development from the Middle Ages to the present. articular attention is given to the impact of the Industrial Revolution on national conomics, particularly on England's commerce and industry.

**G)111. Economic History of the United States** (3) II

A comprehensive survey of American economic development and of national gislation in the field of industry and commerce.

**27. Agricultural Economics** (3) II (Not offered in 1951-52)

Major problems of finance, markets, conservation, overproduction, economic institutions and governmental policy, in relation to agriculture. Emphasis on regional roblems.

**28. Urban Land Economics** (3) I

Real estate in its various aspects: Property rights, transfer of title, valuation, nance, selling, property management, taxation, insurance, city planning, etc., with pecial emphasis upon problems as they exist in San Diego.

**G)131. Public Finance** (3) II

Principles and practices of taxation and public expenditures. Economic effects f public spending, debts and taxation. Financing social security and other services. iscal policy and prosperity. Relation to inflation and deflation. Special emphasis on ocial problems involved.

**33. Corporation Finance** (3) I, II

The corporate form of organization; instruments of long-time finance; methods f raising capital, efficient financial management, financing of reorganizations, and overnment control. Not open to students who have had Business 133.

**35. Money and Banking** (3) I, II

The elements of monetary theory. History and principles of banking with special eference to the banking system of the United States. Prerequisite: Economics 1A-1B.

**40. Statistical Methods** (3) I, II

Statistical method in the social sciences. Tabular and graphical presentation. requency and time series analysis. Index numbers and correlation techniques. Prerequisite: Mathematics A-B, and C, or equivalent. Not open to students with credit or Sociology 103, Psychology 104A, 104B.

**42. Business Cycles** (3) I

Fundamental factors in business cycles are analyzed and cycle theories are xamined. Study of current business conditions begins early in the course and develops nto practical application of forecasting methods to both business and other data. rerequisite: Economics 1A-1B.

**50. Labor Problems** (3) I

A study of labor organizations and their policies, wages, strikes, unemployment, ocial insurance, child labor, labor legislation, plans for industrial peace, and other abor problems.

**51. Principles of Labor Legislation** (3) II

Federal, state and local laws and regulations concerning labor problems, industrial relations, and governmental policies with respect to labor; important court decisions; the make-up and functions of commissions and boards; labor union attitudes ith respect to legislation and the courts.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**(G)170. Government and Business** (3) I, II
General survey of governmental activities affecting business; the state as entrepreneur and manager; governmental assistance to business; governmental re lation of business in its historical, legal and economic aspects, including recent de opments in the United States and abroad; proposed policies.

**171. Transportation** (3) I
The development of railway transportation; railroad financing; rates and r making; governmental regulation; government operation of railroads during the w recent development of motor and air transportation. Prerequisite: Economics 1A-

**172. Public Utilities** (3) II (Not offered in 1951-52)
The growth of public utilities in the United States; economics of public uti rates; valuation; public regulation and its legal basis; public ownership. Prerequisi Economics 1A-1B.

**185. Social Insurance** (3) I (Not offered in 1951-52)
Old age pensions, health insurance, unemployment insurance, and So Security Act. Strength and weakness of existing systems.

**190. International Economics—Principles** (3) I
National welfare and foreign trade. Principle of comparative costs, compara advantages in various nations. Foreign exchange and the balance of payments, financ foreign trade. Regulations over trade and obstructing factors. Techniques of export and importing. Doctrines of international trade.

**195. International Economics—Problems** (3) II
Important aspects of international cooperation and conflict in the econo sphere, conditions essential to future cooperation. The quest for foreign markets, materials, investment opportunities and population outlets. Commercial policies, in national economic conferences and organizations. Colonial rivalries and post problems.

**198. Investigation and Report** (3) I, II
Designed to stimulate independent study and investigation; to furnish guida in the collection, organization, and presentation of factual material; to improve technique of term reports. For economics majors only.

**199. Special Study** (1-3) I, II
Designed exclusively for seniors with a major in economics. Maximum cre six units.

### Graduate Courses

**200A-200B. Seminar in the Development of Economic Thought** (2-2) Year I
A critical study of the development of economic thought and of contempor economic thought, in order to provide a clearer understanding of major econo problems of the day.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibl raphies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)
An individual study course designed primarily for candidates for the mast degree.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

# EDUCATION

## IN THE DIVISION OF EDUCATION

### Major

A *major in arts and sciences* is not offered in education; however, education is a ajor for the general elementary and kindergarten-primary credentials. For specific formation, refer to the requirements for these credentials.

A *teaching major* is offered in education for the general elementary and kinder-rten-primary credentials.

### Minor

A *minor in arts and sciences* is offered in *education.* This minor consists of a inimum of 15 upper division units in education selected with approval of the chair-an of the Division of Education.

A *teaching minor* is not offered in education.

Students will be admitted to education courses only when they are admitted to acher education or have permission from the chairman of the Division of Education. xperienced teachers may take education courses for which they have the pre-quisites. Students who take a minor in education must have been regularly admitted teacher education. (See Admission to Teacher Education.)

### Lower Division Courses

**Review of Arithmetic** (0) I, II

**Review of Handwriting** (0) I, II

**Review of Reading** (0) I, II

**Review of Spelling** (0) I, II

Noncredit courses designed to increase competence in the skill subjects. For udents who do not qualify on the respective sections of the Fundamentals Test quired of all applicants to teacher education.

### Upper Division Courses

**0B. Methods and Materials of Instruction and Audio-Visual Aids**
Major (2) Minor (2) I, II

Professional courses in specific teaching fields taken just prior to or concurrently ith the first directed teaching assignment. Each course emphasizes the application best practice with reference to each subject area named.

Subject fields for sections in 100B are as follows:

**fered in the Fall Semester**

100B-A.—Methods in Art
100B-B.—Methods in Accounting
100B-E.—Methods in English
100B-HE.—Methods in Home Economics
100B-L.—Methods in Romance Language
100B-Ma.—Methods in Mathematics
100B-Me.—Methods in Merchandising
100B-Mu.—Methods in Music
100B-PE.—Methods in Phys. Ed. (Men)
100B-P.Sc.—Methods in Physical Science
100B-S.—Methods in Shorthand
100B-SA.—Methods in Speech Arts
100B-S.Sc.—Methods in Social Science
100B-SS.—Methods in Secretarial Subjects
100B-T.—Methods in Typing

**Offered in the Spring Semester**

100B-E.—Methods in English
100B-IA.—Methods in Industrial Arts
100B-L.Sc.—Methods in Life Science
100B-PE.—Methods in Phys. Ed. (Women)
100B-S.Sc.—Methods in Social Science

**102A. Measurement and Evaluation in Elementary Education (3) I, II**
The use of intelligence and achievement tests in the diagnosis and improvem
of learning; construction of objective examinations; problems of evaluation in edu
tion; the elements of statistical techniques.

**102B. Child Growth and Development (3) I, II**
Study of the mental, emotional, social, and physical development during chi
hood and early adolescence. Directed observation required. General education cou
in family life education.

**102C. Growth and Development of the Adolescent (3) I or II**
Study of adolescent physiological, psychological, social, and emotional devel
ment. Field work with adolescent groups in the community is required.

**102D. Measurement and Evaluation in Secondary Education (2) I or II**
Problems of evaluation in secondary education, construction of examinations,
elements of statistics, the selection and interpretation of standardized measures,
appraisal of audio-visual instructional materials. Field work required. Prerequisi
Education 130.

**105A. Introduction to Psychological Testing (3) I, II**
The basic principles of testing. The selection and critical evaluation of gr
tests of intelligence, personality, aptitude, interest and achievement. Prerequisi
One of the following courses: Psychology 5, 11; Education 102A, 102D. Not open
credit to students with credit for Psychology 105A.

**E112A. Methods in Teaching Americanization Classes (2) Extension only**
Methods used in teaching the various grade levels found in Americanizat
classes, including those preparing for their naturalization. Includes discussion of
skills and techniques in learning to speak, read, and write English; aids in organiz
and conducting classes; and in helping teachers to understand backgrounds of fore
born.

**115A. History and Philosophy of Education (2) I, II**
Historical backgrounds and underlying philosophies upon which the public sch
system has been established. Emphasis on the meaning of education, educational ai
and values, and democracy and education. Prerequisite: Senior standing or the equi
lent; minimum of 12 units of education.

**115B. Secondary Education (3) I or II**
An introduction to understanding the development of secondary education and
present status as a social institution. Topics developed include: Curriculum; teach
methods; audio-visual instructional materials; organization and administration; gu
ance; and objectives. Field work required.

**116. Directed Teaching (3-12) I, II**
Systematic observation, participation and teaching under supervision in
campus elementary school, the affiliated elementary, junior high and senior high scho
During each semester of student teaching a weekly conference period is required
indicated in the time schedule. Prerequisite: Admission to teacher education; edu
tion program approved by Coordinator of Elementary or Secondary Education.
grade below C is unacceptable for a credential.

**117A. Elementary Music Education (2) I, II**
Objectives of music teaching; study of the child voice; and organization of
material by grades. Procedure in presenting rote songs, ear training, elementary n
tion, music reading, and part singing. Prerequisite: Music 7A, or the equivalent.
open to students who have had Music 7B.

**117B. Methods in Instrumental Music (2) I, II**
The theory of organizing and conducting school bands and orchestras, and
selection of materials. Provides practical experience in conducting a children's orches
and teaching sectional groups. Systematic planning for pupils of various ages
abilities.

**119. Art in the Elementary School** (2) I, II
Discussion of the elements and principles of art and their place in the art expression and appreciation of the elementary school child. Laboratory experience in elementary school problems. Not open to students taking the elementary credential. Prerequisite: Art 6A.

**122. Social Studies in Elementary Education** (2) I, II
The purpose, scope, organization and development of instructional procedures in he social studies in the elementary school. Development of curriculum units and the nalysis of teaching materials.

**123. Science in Elementary Education** (3) I or II
Elementary science and its relation to instructional units in the social sciences, he construction and use of equipment, the effective use of audio-visual aids, the use of nvironmental resources, and the use of texts and supplementary material.

**125. Curriculum in Elementary Education** (3) Irregular
A survey of the following elementary subject areas: The language arts, mathematics, music, science, and the social sciences. Emphasis upon the selection of content, eaching methods, and materials as they relate to social needs, psychological principles, nd the nature of the learner.

**126. Literature in Elementary Education** (3) I, II (Irregular)
Criteria for the selection of children's literature, children's reading interests, the levelopment of units of instruction in the social studies, the use of the verse choir, lramatic readings and similar procedures, and the use of the library.

**129. Arithmetic in Elementary Education** (2) I or II
For teachers of arithmetic in the elementary and junior high school. Emphasis is laced upon the understanding of the systems of notation and language techniques. Opportunity will be given for the development of instructional materials and rocedures.

**130. Educational Psychology** (2) I, II
To develop understanding of the applications of psychological research for effective classroom teaching. Observation and field work required. Prerequisite: Psychology l. Not open to students with credit for Psychology 130.

**134. Behavior Problems in Early Childhood** (1) Summer
Lectures and related readings on the typical behavior problems of two to twelve year olds, for teachers and parents.

**136. Reading in Elementary Education** (3) I or II
Scientifically developed procedures for determining reading readiness, beginning reading, independence in work recognition, vocabulary development, word analysis, standards of attainment, types of reading programs, and the selection, preparation and use of reading materials.

**138. Workshop in Family Life Education** (3) Summer
Series of lectures, discussions, and laboratory sessions devoted to furthering understanding of the problems of family life education. The student will have an opportunity to develop units suitable for a program of family life education. Community agencies will participate in the workshop.

**143. Adult Education** (3) (Irregular)
A study of the aims and scope of adult education and its function as a part of the ublic school system. Individual and group work will be emphasized. Admission by ermission of the instructor.

**144. Diagnosis and Remedial Treatment of Difficulties in Reading** (3) I or II
The causes of reading difficulties and the procedures for diagnosis and remedial reatment. Practical work with children with reading problems. Primarily for principals, supervisors and teachers-in-service. Prerequisite: Education 102B or Education 102A, and Education 136, or one year of successful teaching experience.

**145A. Organization and Administration of Music Education** (2) I, II
Theory of the general principles of music administration; correlation of music with the various subjects in the public schools; music tests; creative work.

**146. Education Practicum** (Kindergarten-Primary) (4) I, II

A continuation of Education 148 and will accompany Education 116 in t kindergarten. A study of the theory of early childhood education providing experien with children of nursery school and kindergarten ages. Prerequisite: Educati 147, 148.

**146B. Interpretation of Early Childhood Behavior** (3) Summer

For kindergarten-primary teachers treating the analysis and interpretation early childhood behavior. Emphasis on understanding and interpreting the causati factors in typical behavior of children to parents, social workers, teachers, and othe concerned with the guidance of kindergarten-primary children.

**147. Education Practicum** (10) I, II

Required of all students who expect to receive a credential which will quali them to teach in the kindergarten or in the elementary school. Students should ta the course during the next semester after admission to teacher education, which usually the first semester of the junior year. Registration is strictly limited to tho who have been approved by the Committee on Admission to Teacher Education.

The content of the Education Practicums include both classroom participati (directed teaching) and the study of the principles of education. The course includ Reading (2); Social Sciences in the Elementary School (2); Language Arts (2 Arithmetic (2); Observation (1) Audio-Visual-Radio Instruction (1) is integrat with the course.

**148. Education Practicum** (12) I, II

This course is a continuation of Education 147 and is required of all studer who are candidates for the general elementary credential or the kindergarten-prima credential. An extended analysis is made of the psychology of education in vario fields and application is made through directed teaching in grades 4 to 6. The cou includes Elementary Science Education (1); Elementary Art Education (2); Eleme tary Music Education (2); Educational Psychology (learning process and theory audio-visual education) (2); Curriculum in Elementary Education (2); Direct Teaching (2); Audio-Visual-Radio Instruction (1). Prerequisite: Education 1

**149A. Laboratory in Elementary Education** (3) Summer

A general course in observation and theory, including a study of arithmet reading, language, music, science, social studies, art, spelling. Students in this cou will observe in the summer demonstration school and discuss with the staff teaching procedures.

**149C. Laboratory in Rural Education** (6) Summer

Obervation in a one-room multigraded summer demonstration school. Stude will observe demonstrations, discuss procedures with the staff, and prepare mater for their own schools.

**149D. Workshop in Elementary Education** (3 or 6) Summer

To meet the needs of individual or groups of teachers who desire to stu selected problems in elementary education. The observation of classroom teaching be provided for members in attendance. Interested persons should correspond with Coordinator of Elementary Education, San Diego State College.

**155. Guidance in Elementary Education** (3) Summer

A study of the basic principles of guidance and their function in the educatio process as applied in the elementary school.

**156. Guidance Conference** (1) Summer

A series of lecture and discussion sessions centering on current problems counseling and guidance. Designed to serve the needs of any person desiring to k informed of developments in this area. Admission upon permission of the direc of this conference.

**158. Supervision of Child Welfare and Attendance** (3) Summer

Content includes laws relating to children, guidance principles, social case wo agency relationships, conference techniques, home visitation methods, employm supervision, attendance work, child accounting, familiarity with testing techniq

**61. Legal Aspects of Education** (3) I or II

A study of the school law of California, important court decisions, rulings of the alifornia State Superintendent of Public Instruction and the Attorney General, istorical and current trends, and comparative data from throughout the United tates.

**71. Audio-Visual Conference** (1) Summer

A series of lectures, discussions and demonstrations, centering on problems in he use of audio-visual instructional materials. Designed for teachers, administrators, udio-visual representatives, and others interested in current developments in this rea. Course may be taken twice for credit.

**74. Audio-Visual-Radio Education** (3) I, II

A study of audio-visual-radio aids as they affect learning. Analysis and development of materials of instruction and their presentation; operation of equipment.

**74BE. Audio-Visual Business Education** (3) Summer

A review of the skills and knowledges necessary to use audio-visual aids, followed y intensive study and research in the literature available and by practice with the aterials and techniques that apply to business education.

**75. Creating Audio-Visual Materials for Classroom Use** (3) I or II

Practice in the creation and evaluation of instructional materials, such as 5 mm. film strips, 16 mm. films, scripts, recordings and other audio-visual materials. rerequisite: Education 174, or equivalent.

**76. Problems of Speech Correction and Articulation** (3) (Irregular)

Analysis and discussion of the major articulatory problems as encountered in ublic school work, particularly in California. Required of all students for the speech orrection credential. Not open to students with credit for Speech Arts 176.

**77. The Teaching of Lip Reading** (2)

History, theory and methods of lip reading. Aids for the classroom teacher; rogram and materials of instruction for the specialized teacher. Opportunities for ractice teaching are offered. Not open to students with credit for Speech Arts 177.

**78. Problems of the Hard of Hearing** (2)

The adjustment of the hard-of-hearing group with emphasis on the public hool child. State and county hearing programs; technique of audiometry; use of earing aids; educational, classroom, and social problems.

**79A-179B. Nervous Speech Disorders** (3-3) Year, I

Classification and study of speech defects and disorders. Training in corrective chnique for public schools; observation. Required for the Special Secondary Crential in Correction of Speech Defects. Not open to students with credit for Speech rts 179A-179B.

**81. Exceptional Children** (3) I

Characteristics and adjustment problems of mental, physical, and emotional viates; emphasis upon the mentally handicapped.

**82. Curriculum and Methods for Mentally Retarded Children** (3) II

Selection, organization and presentation of curricular materials for mentally tarded children.

**83. Practicum for Teaching Mentally Retarded Children** (3) Summer

Analysis and interpretation of educational procedures utilized with the retarded arner. A demonstration class will be available for observation. Education 182 must taken prior to, or concurrently with, Education 183.

**84A. The Secondary School** (4) I, II

To orient the student toward his function as a teacher in the public secondary hools, including basic principles, history and philosophy of education, and audiosual instruction, and to understand the school as a social institution. Field work quired.

**184B. Development and Learning** (4) I, II

To acquaint the student in secondary education with the nature of develo ment and the learning process, with consideration of mental hygiene, guidance a the place of audio-visual aids. Field work required.

**184C. The Teaching Process** (4) I, II

To develop teacher competency at the secondary level in relationships and pla ing with the pupil, the community, and the profession, including classroom manageme audio-visual education, lesson planning, evaluation, and co-curricular activities. Fie work required.

**188. Techniques of Pupil Appraisal** (3) I or II

A study of, and practice in, techniques of collecting, assembling, and interpreti data about individual pupils for guidance purposes. Field work required. Prerequisit Education 102D or 102A, or consent of instructor. Not open to students who have cre for Psychology 105A or 105B.

**189. Workshop in Secondary Education** (3 or 6) Summer

Designed to meet the needs of individual or groups of teachers who wish develop or continue the study of some problem with the consultation of the Colle Staff and the San Diego County Curriculum Staff.

**191. Driver Education** (2) Summer

A workshop type course designed to prepare teachers of the course in hi school. Enrollment by permission of the instructor.

**199. Educational Problems** (1-6) I, II, and Summer

For senior and graduate students in education who have shown ability to wo independently. Problem to be chosen after consultation with a staff member. Adm sion by permission of the staff. Credit and hours to be arranged.

## Graduate Courses

For general requirements for admission to graduate courses, see statement Admission to Graduate Status in section on Admission and Registration. In additi to these general requirements, 12 units of professional education are prerequisite enrollment in all graduate courses.

**207. Educational Sociology** (3) Summer

A study of the social, economic, political and moral setting in which prese day American education functions. Prerequisite: Education 115A, or equivale teaching experience.

**220. Advanced Educational Psychology** (3) I, II

Advanced study of the research and its application to learning and hum growth. Prerequisite: Educational Psych. 130, or equivalent, teaching experience.

**230. Guidance Problems in Secondary Education** (3) I, II

Individual and group study of the theory and practice of guidance with empha upon practical problems of the members of the class.

**232. Problems in Vocational Guidance** (3) I or II

To prepare teachers for vocational guidance in the secondary schools. Inclu occupational information, vocational aptitude measurement, and educational gu ance. Prerequisite: Education 230, or equivalent.

**233. Guidance Counseling Techniques** (3) I, II

Designed for school counselors. To stress the understandings and procedu necessary for effective interviewing. Prerequisite: Education 230, or equivalent.

**233B. Guidance Counseling Techniques** (3)

Continuation of the work of Education 233. Prerequisite: Education 230 a 233, or equivalents.

**237. Research in Guidance Problems** (1-3) I, II

Individual study by graduate students who have demonstrated exceptional abil and a need for such work. Admission by permission of the Coordinator of Second Education and instructor.

8. **Field Work in School Guidance** (3) I or II

Application of the principles and procedures in testing, counseling, and related rsonnel work in the public schools. Weekly seminar sessions with college and operating staff. Prerequisite: Permission of instructor and 12 units in guidance ad related areas.

9. **Workshop in Pupil Personnel Services** (3) Summer

Application of principles and procedures to specific situations for improvement pupil personnel services. Individual problems emphasized. Prerequisite: Teaching perience and permission of director of workshop.

1. **Problems in the Teaching of Arithmetic** (3) I or II, Summer

A study of research and practice in the methods of teaching and in the curriculum elementary and junior high school arithmetic. Prerequisite: Education 129 or uivalent.

2. **Problems in the Teaching of Reading** (3) I, II

Advanced study of trends in reading instructions. Topics include developmental quences in reading skills and abilities, reading in the content fields, individual fferences, and interests. Students will develop individual projects or problems. rerequisites: Education 136 and 144 or equivalents.

3. **Seminar in Social Studies in Elementary Education** (3) I or II, Summer

Advanced study of problems in teaching social studies in the elementary school th emphasis on the study of the scientific research in the field. Prerequisite: Permis-on of instructor.

4. **Seminar in Language Arts in Elementary Education** (3) I or II, Summer

Advanced study of problems in teaching language arts in the elementary school, cluding spelling, literature and written and oral communication. Emphasis will be the study of scientific research in the field. Prerequisite: Permission of instructor.

5. **Seminar in Elementary Education** (3) I or II

A study of the methodology of research with particular reference to the basic search in the psychology and teaching of the elementary school subjects. Pre-quisite: 12 units in elementary education and permission of the instructor.

0. **Curricular Problems in Secondary Education** (3) I, II

Present status and development of the secondary school curriculum. Emphasis on individual study and development of solutions of problems of the students. Pre-quisite: 12 units in secondary education and permission of the instructor.

2. **General Education in the Secondary School** (3) Summer

A course designed for teachers in service. A study of the function and implemen-ion of general education in the secondary school. Prerequisite: 12 units in secondary ucation and permission of the instructor.

4. **Advanced Problems in Secondary School Instruction** (3) I, Summer

An analysis of the scientific research and philosophical principles in secondary hool instruction. Prerequisite: Teaching experience and permission of instructor.

5. **Recent Trends in Secondary Curriculum** (3) I or II, Summer

Current practices and trends in secondary schools. Extensive individual work related problems of interest to members of the class. Prerequisite: 12 units in ondary education and permission of the instructor.

7. **Workshop in Intercultural Education** (4)

A cooperaive workshop sponsored by the college and the San Diego City Schools study trends in intercultural education in American schools, including units, cur-ular and instructional materials and techniques. Enrollment only by application to Chairman of the Division of Education.

3. **Research in Curricular Problems** (1-3) I, II

Individual study by graduate students who have demonstrated exceptional ability a need for such work. Admission by permission of the Coordinator of Secondary ucation and instructor.

**260. Federal, State, County and City School Organization and Administratio**
(3) I, Summ

A study of the federal, state, county and city school organization, administrat and supervision, including school law.

**262. The Organization and Administration of Elementary Schools**
(3) I or II, Summ

A study will be made of the problems of personnel, local finance, curricul plant, community relations, and legal aspects of elementary schools. Required a prerequisite to Education 266. Prerequisite: Teaching experience, valid Gen Elementary Credential, and consent of the instructor.

**263. The Organization and Administration of the Secondary School**
(3) I or II, Summ

Topics will cover all aspects of the duties of a secondary school administra including personnel, finance, curriculum, equipment and supplies, public relati transportation, and law. Prerequisite: Possession of a valid General Secondary dential and permission of the instructor.

**264. Elementary School Supervision** (3) I or II, Summer

Principles and practices of supervision and methods of evaluating instruct and the curriculum in elementary education. Prerequisite: General Elementary dential, teaching experience, Education 260, 262, or equivalents, and permission of instructor.

**265. Secondary School Supervision** (3) I or II, Summer

For those who will be responsible for the supervision and evaluation of the riculum and teaching methods in the secondary school. Prerequisite: Possession valid General Secondary Credential, teaching experience, and permission of instructor.

**266. Field Work in Elementary School Administration and Supervision** (2)

Study of the administration and supervision of an elementary school, for Elementary School Administration and Supervision Credentials. Field project requ of all students under the direction of a college staff. Prerequisite: Education 26 264, or equivalent.

**267. Field Work in Secondary School Administration and Supervision** (2)

Study of practices as they are found in secondary schools relative to adminis tion and supervision; to insure direct contact with existing programs and proced through faculty guided projects. Prerequisite: Education 263 or 265, or equivalent

**268. Seminar in School Administration** (3) Summer

An intensive study of selected problems in finance, business administration, other topics in the field of school administration. Provision will be made for indivi work on special topics of interest to students.

**270. School Finance, Business Administration, and Law** (3) II, Summer

A study of public school finance at state and local levels; an analysis of business administration of schools; a study of school law as it applies to school fina administration and other aspects of public education.

**271. Supervision of Student Teaching** (2) I, II

Study of selection, orientation, induction, counseling and evaluation of crede candidates and student teachers; and helping student teachers plan lessons, con classroom learning, analyze pupils' difficulties and achievement. Open to experie teachers interested in the teacher education program.

**274A. Utilizing Audio-Visual Materials in the Classroom** (3) I

A critical analysis of research evaluating the use of visual, auditory, and o sensory materials in education. Prerequisite: Education 174, or equivalent.

**275. Administering the Use of Audio-Visual Materials** (3) II, Summer

Organizing, supervising, and coordinating audio-visual centers as an inte part of educational systems. Prerequisite: Education 174, or by permission of instructor.

**78. Educational Leadership** (3) I, II, Summer

An analysis of the factors and practice in procedures of group and individual adership in four areas: (a) the community; (b) the teaching staff; (c) the student ersonnel; (d) the professional field of educational administration and supervision. rerequisite: Permission of the instructor.

**90. Procedures of Investigation and Report** (2-3) I, II, Summer

Emphasizes procedures in selecting and writing a project or thesis. Methods of nvestigation and reporting data. Extensive survey of an area of professional literature analyze techniques and style. Separate sections for elementary and secondary levels.

**98. Special Study** (1-3)

An individual study course designed primarily for candidates for the master's egree.

**99. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

**16. Directed Teaching** (3-3) I, II

Systematic observation, participation, and teaching under supervision in an ffiliated school. Thirty clock hours of student teaching will usually earn one unit of edit, but the credit finally allowed will depend upon the nature and quality of the aching done. Any work below a C grade is unacceptable for a credential.

No student can enroll in this course until he has completed at least 10 units of ork in education and has been admitted to candidacy for the teaching credential.

During the semesters in which the student takes his assignments in student aching, he must meet with the college supervisor one hour each week for conference nd discussion of problems encountered in his teaching.

Students who have had student teaching in preparation for the junior high school special secondary credential should confer with their departmental and educational lvisers concerning partial fulfillment of this requirement as the result of having mpleted the student teaching required for the credentials mentioned above.

# ENGINEERING

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in *engineering* for the B.S. degree. Courses the major are in addition to 45 units in general education courses. Lower division quirements for all engineering options: Chemistry 1A-1B; Physics 4A-4B-4C; athematics 3A-3B, 4A-4B; Engineering 21 and 23, or their equivalents. Refer to ngineering Curricula in section of the bulletin on Preprofessional and Vocational urricula for additional requirements for various options. Upper division requirements: minimum of 36 upper division units. Specific requirements for the various engineering options are listed in the Engineering Curricula in section of the bulletin on Preofessional and Vocational Curricula. A minor is not required of engineering majors.

A *teaching major* is not offered in engineering.

### Minor

A *minor in arts and sciences* is offered in engineering. The minor must include at ast 15 units in engineering, nine units of which must be from courses carrying upper vision credit. The courses selected must be a logical sequence approved by faculty viser.

A *teaching minor* is not offered in engineering.

### Lower Division Courses

**-1B. Plane Surveying** (3-3) Year, I

Two lectures and one three-hour field period per week. Semester I: Use, care and justment of surveying equipment. Introduction to standard procedures and techques. Prerequisites: Engineering 2, or equivalent, Math. D, and sophomore standing. mester II: Computations and map making; land, topographic, and city surveying. erequisite: Engr. 1A.

**2. Mechanical Drawing** (3) I, II

Freehand lettering, use and care of drafting equipment, simple orthograp projection, introduction to problems of dimensioning. Open to students lacking cre for a year course in senior high school mechanical drawing. Not open to students w credit for Industrial Arts 2.

**21. Descriptive Geometry** (3) I

Fundamental principles of descriptive geometry and their application to en neering problems. Solutions of point, line and plane problems; curved lines and s faces; intersections of surfaces. One lecture and two three-hour laboratory peri per week. Prerequisite: Engr. 2, or equivalent, and sophomore standing.

**22. Machine Drawing** (3) II

Standard drawing methods and procedures, complete sets of working drawing simple machine parts, gears and cams; includes tolerance dimensioning, section threads and fasteners. One lecture and two three-hour laboratory periods per we Prerequisites: Engr. 21, Math. 3A-3B.

**23. Materials of Engineering** (2) II

A concise presentation of the physical properties of the common materials u in structures and machines, with brief descriptions of their manufacture and fa cation. Two lectures per week. Prerequisite: Sophomore standing.

### Upper Division Courses

**100A-100B. Elements of Electrical Engineering** (3-3) Year, I

Theory and characteristics of electrical equipment with emphasis on indust applications. Lectures and problems. Semester I: Direct current circuit anal D. C. motors and generators. Introduction to alternating current circuits. Prerequisi Math. 4A, Physics 4B, or permission of the instructor. Semester II: Alternating rent circuit analysis. Transformers, alternators, induction and synchronous mot conversion apparatus, and transmission lines. Prerequisite: Engr. 100A.

**101A. Electrical Engineering Laboratory** (2) I

Laboratory determination of the characteristics of direct current machinery circuits, single phase alternating current circuits. One three-hour lab. and report week. Prerequisite: Engr. 100A, or taken concurrently.

**101B. Electrical Engineering Laboratory** (2) II

Laboratory determination of the characteristics of single phase and polyp circuits, machines, and related equipment. One three-hour laboratory period and re per week. Prerequisite: Engr. 100B, or taken concurrently.

**102A-102B. Analytical Mechanics** (3-3) Year, I

Lectures and problems. Emphasis on engineering applications. Semester I: P ciples of statics which deals with the conditions of equilibrium of bodies acted by forces. Prerequisites: Physics 4A-4B, Math. 4A. Semester II: Principles of dyna which deals with the fundamentals of rectilinear and curvilinear motion of part and rigid bodies, and the rotation of rigid bodies. Prerequisite: Engr. 102A.

**104. Communications** (3) II

Power amplifiers, oscillators, modulators and detectors. Radio transmi and receivers for amplitude modulation and frequency modulation. Television syst Antennas and radio wave propagation. Prerequisite: Physics 102 or permissio the instructor.

**105. Fluid Mechanics** (3) II

The statics and dynamics of incompressible and compressible fluids. Visc fluid friction. Dimensional analysis. Fluid measuring instruments. Flow of pressible and incompressible fluids in pipes. Flow of liquids in open channels. Pu Prerequisites: Mathematics 4A, Physics 4A, Engineering 102A, and Engineering

**106. Fluid Mechanics Laboratory** (2) II

Characteristics of fluid measuring instruments. Fluid flow through pumps One three-hour laboratory and report per week. Prerequisite: Engineering 1C concurrent registration.

**22. Machine Design** (4) I

Individual design of a useful machine encompassing fundamental considerations simple machine parts. Practical design methods utilizing professional literature are ressed. Three lectures and one three-hour laboratory period per week. Prerequisites: ngr. 23, 102A, 140.

**24. Radio Measurements** (2) II

A laboratory course on measurements of the parameters of resonant circuits at dio frequencies. Study of the properties of oscillators, modulators, detectors and ave guides. Prerequisite: Previous or concurrent enrollment in Engineering 104. udents with credit in Physics 124 may not receive credit for this course.

**27. Engineering Thermodynamics** (3) I

An introduction to the basic principles of thermodynamics; laws of perfect gases, ipors and mixtures; cycles. Applications to engineering problems such as the analysis heat, power, and refrigeration systems, and steady-flow processes. Lecture and oblems. Prerequisites: Mathmetics 4A and Physics 4B.

**28. Applied Engineering Thermodynamics** (3) I

The study of various types of heat power equipment; steam generation, turbines, ciprocating engines and auxiliaries; fuels and lubricating oils; gas and oil engines, s turbines, refrigeration and compressors. The practical application of basic theory proper, efficient operating practices is stressed. Lectures and problems. Prerequisite: ngineering 127.

**9. Heat Power Laboratory** (2) I

Testing of steam generators and heat balance of same; steam turbine; reciproting engine; internal combustion engines; flue gases, lubricating oils and boiler feed ater. Emphasis upon standardized testing procedures, approved by SAE and ASME, d standard operating procedures. One three-hour laboratory period and report per eek. Prerequisite: Engineering 127.

**0. Route and Construction Surveying** (3) I

Application of surveying to engineering problems. Methods of route surveys for ghways, railroads, utilities. Construction surveys for buildings and other structures. arthwork computations. Two lectures and one three-hour field period per week. Prequisite: Engr. 1B.

**0. Strength of Materials** (3) II

Elastic properties and strength of engineering materials. Analysis of types of ilures. Stress analysis and deformation of simple structural and machine members. hotoelasticity. Lecture and problems. Prerequisite: Engr. 102A.

**1. Materials of Engineering Laboratory** (2) II

Theory and operation of testing machines and auxiliary apparatus. Conduct of sts to determine significant characteristics of commonly used engineering materials. cluded are heat treatment of metals, metallographic tests, and photoelasticity. One ree-hour laboratory and report per week. Prerequisite: Engr. 140, or taken conrrently.

**2. Stress Analysis** (3) I

Determination of stresses in trusses, beams, and frames. Combined stresses; ace structures; general theorems relating to elastic systems; statically indeternate structures; deflections; analytical and graphical methods of solution. Lectures d problems. Prerequisites: Eng. 102A-102B, 140.

**5. Internal Combustion Engines** (3) II

Application of theory of thermodynamics to internal combustion engines. Essenl features of design, operating characteristics, and application of gasoline, diesel, and s engines, and the gas turbine. Lectures and problems. Prerequisites: Physics 4C, ath. 4A. Recommended: Engr. 128.

**0. Industrial Electronics** (3) II

Photoelectricity and its applications; rectification and inversion; theory and plications of thyratrons and ignitrons including welding; radio-frequency heating; ectrostatic precipitation; motor control and introduction to servomechanisms. Prequisite: Physics 102.

**156. Aerodynamics** (3) II

Mechanics and thermodynamics of air; wing characteristics; drag; wind tunn testing technique; propellers and power plants; aircraft performance; stability a control. Introduction to compressible aerodynamics. Lectures and problems. Prereq sites: Engr. 102A-102B.

**180. Principles of Engineering Economy** (3) II

Analysis of the costs of development and promotion, construction, operatic depreciation and depletion. Capital recovery, income, return and yield. Valuations a appraisals, cost analysis and financial analysis. Application to engineering problem Prerequisite: Senior standing.

**199. Senior Report** (2) I, II

Investigation of specific problems of advanced nature. Preparation of report. P requisite: Advanced senior standing.

NOTE.—In laboratory courses special emphasis is placed upon the preparation neat, concise, complete and intelligent reports.

# ENGLISH

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *English*. Courses in the major are addition to 45 units in general education courses. Lower division requirements: least 15 units of work, including English 1 or 41, and 12 units of electives, of wh six must be in a year course. Upper division requirements: A minimum of 24 up division units in English and comparative literature, selected wth the approval o departmental representative; two years of lower division work in a foreign langu or the equivalent reading knowledge of a language is strongly recommended. A mi is not required of students majoring in English.

Prospective majors of sophomore standing may, with the consent of the cou instructor and subject to general college regulations (see section on Lower Divis and Upper Division Courses), substitute six units of upper division electives for units of lower division work, such upper division units to be selected from the followi English 101A, 116A, 116B, 118A, 118B, 119A, 119B, 126A, 126B, 143A, 143B.

Students of junior or senior standing may substitute for any deficiencies in lo division requirements in English (except English 1 or 41) an equivalent number units of upper division courses selected from the following: English 101A, 11 116B, 118A, 118B, 119A, 119B, 120A, 120B, 126A, 126B, 143A, 143B, 151, 159.

A *teaching major in English* is offered for the general secondary or junior h school credential. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *English*. The minor consists of a mi mum of 15 units, nine units of which must be in courses carrying upper division cre

A *teaching minor* is offered in English for the general secondary, the spe secondary, the general elementary, and the kindergarten-primary credentials. specific information refer to the outlines of requirements for these credentials.

### Comparative Literature

For courses in world literature, see Comparative Literature; these courses g credit toward the English major or minor or toward the minor in Comparat Literature.

### Credit in Course Sequences

All elective year courses in the department may be begun in either semester, either semester may be taken singly for credit.

## Lower Division Courses

**A. English Fundamentals** (2) I, II

The elements of composition, including drill in grammar and usage; exercises in ocabulary building and in fundamental reading skills; theme writing. Credit in this ourse is equivalent to passing the English A examination and may be counted toward raduation as an elective but not to satisfy lower division English requirements in any urriculum.

**R. Reading Laboratory** (0) I, II

A semi-tutorial service offered by the English Department to those wishing to mprove reading ability, or secure individual help with study problems. Open to all tudents at any level of college work. Consult department chairman.

**W. Writing Laboratory** (0) I, II

A semi-tutorial service offered by the English Department to those wishing ssistance in writing projects, either remedial or advanced. Open to students at any evel of college work. Consult department chairman.

**G)1. Freshman Composition** (3) I, II

Study and practice in the expression of ideas and factual materials; principles of rganization and of effective style, with emphasis on exposition. Prerequisite: Satisfac-ory English A examination or credit in English A.

**G)2A. Freshman Literature: Imaginative** (3) I, II

Training in reading with insight and vividness.

**G)2B. Freshman Literature: Essays and Articles** (3) I, II

Designed to develop college reading skills through practice in the analysis of aterials at various levels of difficulty.

**0. Recreational Reading** (1) I, II

Development of personal tastes for leisure-time reading through lectures and ritten reports. May be taken a second time with new materials.

**0. Latin and Greek Word Derivation** (3) I

A general and elementary course in philology. Study of Latin and Greek roots f most frequent occurrence in English, and of the English words derived from them. o prerequisite. Not open to students with credit for General Language 20.

**0A-50B. Survey of American Literature** (3-3) Year, I

Semester I: Major American writers from the beginning to 1860. Semester II: merican literature from 1860 to the present.

**G)52A-52B. Masterpieces of World Literature** (3-3) Year, I

A chronological survey from Homer to modern times. The first semester stresses he classical epic and tragedy. The second semester, beginning with the Renaissance, tresses prose fiction, the drama, and the essay. Not open to students with credit for omparative Literature 52A-52B.

**6A-56B. Survey of English Literature** (3-3) Year, I

The study of some important works of English literature from the Anglo-Saxon eriod through the Victorian age, with emphasis upon the literary history of each eriod.

**0A-60B. Literature and Personality** (3-3) Year, I

The close study of a limited number of the great creators of literature. The goal f the course is to derive, from markedly different specific works, orderly and gen-ralized methods for the interpretation of great literature.

**G)61. Sophomore Composition** (3) I

An elective course designed to give further training to the student who wishes ractice in writing beyond the freshman level. Prerequisite: English 1 or equivalent.

**2. The Short Story** (3) II

A practical course in writing, including a study of short story techniques and pur-oses, and the writing of complete short stories. Prerequisite: English 1 or equivalent.

**63. Foundations of the Language** (3) II

An introduction to the study of the changes of form and meaning in Engl words with special emphasis on semantics.

### Upper Division Courses

**(G)106. Creative Writing** (3) I

A writing workshop in which students are given opportunity to criticize e other's work. Emphasis on narrative and description, but freedom to pursue whate writing forms may interest the student most. May be taken a second time with material. Not open to students with credit for Journalism 106.

**110. Recreational Reading** (1) I, II

An advanced course in the group reading of modern drama, poetry and fict

**113. American English** (3) I

The development of American English; regional and cultural differences in nunciation, grammar, and vocabulary.

**116A-116B. The Age of Elizabeth** (3-3) Year, I

Semester I: Poetry and prose, exclusive of drama. Semester II: The dram 1642, excluding Shakespeare.

**(G)117A-117B. Shakespeare** (3-3) Year, I

The first semester gives special emphasis to the histories and comedies; second, to tragedy and the dramatic romances.

**118A-118B. Eighteenth Century English Literature** (3-3) Year, I

The first semester emphasizes the social satire of Swift, Pope, Addison, St Dryden, Gay, Prior; and also the first stirrings of the romantic revolt in a numbe important poems and prose works. The second semester is devoted to Johnson Boswell and their circle and to a significant romantic literature antedating the roma outburst.

**(G)119A. English Romantic Poetry** (3) I

The culmination of the romantic movement in the poetry of Wordsworth, C ridge, Byron, Shelley, and Keats, in relation to the thought of the revolutionary per

**119B. The Victorian Poetry** (3) II

Tennyson and Browning with their contemporaries and successors, rela English poetry to nineteenth century life and thought.

**120A. The Seventeenth Century: Milton** (3) II (Alternate years)

The poetry and major prose works of Milton, with stress on the developn of his art and mind; the political and religious background and the events in w Milton participated.

**120B. The Seventeenth Century: Milton's Contemporaries** (3) II (Alternate ye

The seventeenth century poets and prose writers, excluding Milton; the M physical and Cavalier poets; the beginnings of the essay and biography.

**126A. Romantic and Victorian Prose** (3) I

Romantic and mid-Victorian prose writers, including Coleridge, Hazlitt, La DeQuincey, Carlyle, Landor, Macaulay, and Mill, related to the literary, political, social movements of the period.

**(G)126B. Late Nineteenth Century British Prose** (3) II

The essays of Arnold, Thomas Huxley, Newman, Pater, Ruskin, and Steven Study of scientific, aesthetic, and ethical backgrounds.

**129. Contemporary British Literature** (3) II

Selected prose and poetry of England and Ireland from 1914 to the pres including Shaw, Yeats, Synge, Joyce, Maugham, Huxley, D. H. Lawrence, Eliot, Oxford poets, and the principal authors belonging to the two wars.

**131. American Literature: 1820-1860** (3) I

The study of the important romantic writers, with emphasis on the New Eng group.

**32. The Frontier and American Literature** (3) I, II
The influence of the frontier upon American literature studied through various egions and movements. Examinations of source materials, biographies, and representative writers.

**33. American Literature: 1860-1910** (3) II
The rise of realism in American literature. Influences, foreign and native, which romoted the movement. Definition of realism. The literary creed of the realists. The omantic attack and the realist defense.

**G)134. American Literature: 1910 to the Present** (3) I, II
Ideas and forms in representative poetry and prose.

**35. American Colonial and Revolutionary Literature** (3) I
The Puritan system of thought and way of life, and the literary and intellectual movements of the eighteenth century, studied in the works of such representative writers as Mather, Franklin, Paine, Freneau, and Brockden Brown.

**43A-143B. The English Novel** (3-3) Year, I
The history of the English novel from its beginnings to the present century. Emphasis in the first semester will be on the eighteenth century and in the second emester on the nineteenth century.

**G)149. The Study of Poetry** (3) II
A course proceeding from simpler to more complex poetic productions, and esigned to bridge the widening chasm between the poet and the ordinary man. Emphasis on current directions in poetry, and on poetry as an oral and auditory art.

**51. Chaucer** (3) I
A study of Chaucer's works, with emphasis on "The Canterbury Tales" and Troilus and Criseyde."

**G)152A-152B. Survey of Drama.** (3-3) Year, I
Study of selected tragedies and comedies from Asiatic, European, English, and American literature, with emphasis upon the human problems depicted therein and pon the timelessness of certain themes, such as those of Electra and Medea. Lectures, iscussions, and reports on readings. Not open to students with credit for Comparative Literature 152A-152B.

**62. Magazine Fiction** (3) I
Coaching in constructing and writing short stories for commercial publications. Admission by consent of the instructor. Not open to students with credit for Journalism 162.

**66. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**91. Advanced Composition** (3) I
A course designed for prospective teachers of secondary school English. This is ot a methods course, but a content course in grammar, composition, and journalism. Required of all teaching majors in English; open to other students as an elective.

**92. The English Language** (3) II
The study of the history of the English language, of its words and structure, f the changes in inflections, pronunciation, vocabulary, and meaning, and of its use s an instrument of communication and human living. Open only to seniors and raduate students.

**95. Literary Criticism** (3) I
A historical survey of the principles and practices of literary criticism from Greek times to the nineteenth century. Readings in the works of Aristotle, Horace, Longinus, Sidney, Boileau, Dryden, Lessing, Sainte-Beauve, Coleridge, and Arnold. Open only to senior and graduate students.

**99. Special Problems** (1-3) I, II
Students who have demonstrated ability in literary studies may enroll for work ther than that outlined in the regular courses. Admission only by permission of the nstructor with whom the work is to be done. Maximum credit, six units.

### Graduate Courses

**203A-B-C-D. The Critical Study of a Major Author** (2-2-2-2) I, II
A seminar in (A) Shakespeare, (B) Arnold, (C) Mark Twain, or (D) Dickens.

**213A-B-C-D. The Study of a Cultural Period Through Its Literature** (2-2-2-2) I, II
A seminar in (A) the Renaissance, 1500-1660, (B) the Enlightenment, 1660-1780, (C) The Romantic Revolution, 1780-1830, or (D) Industrialism and Democracy, 1830-1914.

**223A-B-C-D. The Study of a Literary Problem** (2-2-2-2) I, II
A seminar in (A) Regionalism in American Literature, (B) the Utopian Theme in Literature, (C) the Idea of the "Gentleman," or (D) European Influences in American Literature.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)
An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

## FRENCH

### IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *French* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: French 1, 2, 3, 4, 5, 6; German 1, 2, or Spanish 1, 2, or Latin 1, 2. Recommended: History 4A-4B. Upper division requirements: A minimum of 24 upper division units, at least 21 units of which must be in French, including French 199. The remaining three units may be selected from French 115, 116; Geography 118; History 121A-121B, 131A-131B, 141, 142, 143A-143B, 144A-144B; or Comparative Literature 101A, 140A-140B, 152A-152B, 155, 158, 159, in consultation with the chairman of the department.

A person majoring in French must have a minor to be decided upon in consultation with his major adviser.

A *major in arts and sciences* is offered in *Romance Languages*. For specific information on this major, refer to the section on Romance Languages.

A *teaching major* is offered in *French* or in *Romance Languages* for the junior high school and general secondary credentials. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *French*. The minor consists of a minimum of 15 units to a maximum of 22 units of work in French, six units of which must be in courses carrying upper division credit.

A *teaching minor* is offered in French for the general secondary credentials, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

**(G)1. Elementary** (3) I, II
Pronunciation, oral practice, readings on French culture and civilization, minimum essentials of grammar.

**(G)2. Elementary** (3) I, II
Continuation of French 1. Prerequisite: French 1 or one year of high school French.

**G)3. Intermediate** (3) I, II
Reading in French of cultural material, short stories, novels or plays; oral ractice; outside reading with oral and written reports. Prerequisite: French 2 or wo years of high school French.

**G)4. Intermediate** (3) II
Continuation of French 3. Prerequisite: French 3 or three years of high school rench.

**. Intermediate** (2) I, II
A practical application of the fundamental principles of grammar by means f oral and written work based on French texts. Prerequisite: French 2 or two years f high school French.

**. Intermediate** (2) II
Continuation of French 5. Prerequisite: French 5 or three years of high school rench.

**0. Conversation** (2) I
Practice in the spoken language; practical vocabulary, conversation on assigned opics; simple dialogues and plays. Prerequisite: French 2 or two years of high school rench.

**1. Conversation** (2) II
Continuation of French 10. Prerequisite: French 10 or French 3, or three years f high school French.

**G)15. French Civilization** (2) I
The major currents and characteristics of French culture, as expressed through he centuries in literature, art, philosophy, music and science. Conducted in English. o prerequisite.

**G)16. French Civilization** (2) II
Continuation of French 15. No prerequisite.

**. Intermediate** (3) I (Offered for last time in Fall of 1951)
Reading and composition; study of standard prose as a basis for class work, llateral reading with résumés and written reports; dictation. Prerequisite: French C r four years of high school French.

**A. Scientific Reading** (3) II
Reading taken from the fields of chemistry, physics, medicine, zoology, biology, tc. Outside readings of books and periodicals, with written reports. Prerequisite: rench 2 with a grade of C or two years of high school French.

## Upper Division Courses

**1A-101B. Conversation and Composition** (3-3) Year, I (Offered 1952-53)
Translation into French from moderately difficult English prose. Outside reading f modern French prose, with written reports in French monthly. Readings and oral iscussions in French of various facets of French life and culture. Prerequisite: rench 4 and 6, or French D, or their equivalent, with a grade of C.

**5A-105B. Modern French Drama** (3-3) Year, I (Offered in 1953-54)
Plays of Victor Hugo, de Vigny, de Musset, Scribe, Augier, Dumas fils, Pailleron, rieux, Hervieu, Maeterlinck, Rostand, and others read and discussed as to subject atter and technique. Outside reading and reports. Prerequisite: French 4 and 6, or heir equivalent, with a grade of C.

**7A-107B. Eighteenth Century Literature** (3-3) Year, I (Offered in 1952-53)
The works of Montesquieu, Voltaire, Rousseau, the Encyclopédistes, and others. rerequisite: French 4 and 6, or their equivalent, with a grade of C.

**10A-110B. Modern French Novel** (3-3) Year, I (Offered in 1951-52)
The French novel from Victor Hugo to the present day, including such authors s: Hugo, Dumas, Stendahl, Balzac, Flaubert, Loti, Anatole France, Bourget, Boreaux, Bazin, Barrès, Romain Rolland, A. Gide, Marcel Proust, and others. Class eading, outside reading, and reports. Prerequisite: French 4 and 6, or their equivant, with a grade of C.

**111A-111B. Seventeenth Century Dramatic Literature** (3-3) Year, I
(Offered in 1954-55

Reading in class of plays of Molière, Corneille, and Racine. Outside readin and lectures on the background of the seventeenth century in France. Prerequisit French 4 and 6, or their equivalent, with a grade of C.

**(G)115. French Civilization** (2) I

An advanced course in French of the past and present, with emphasis on t arts, philosophy, and literature. Lectures, class discussions, outside readings, writt reports on individual topics. Conducted in English. Prerequisite: Sophomore standin

**(G)116. French Civilization** (2) II

Continuation of French 115. Prerequisite: Sophomore standing.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**199. Comprehensive Reading and Survey Course** (3) II

Designed to fill up the gaps in the reading done in courses. Class meeting on a week for guidance, reports, and quizzes. Required of all seniors majoring in Frenc

### Graduate Courses

**214. Contemporary French Literature** (2) I

An intensive study of the current movements and techniques in the nov poetry, and theatre in France from 1900 to the present day. Class discussion, ou side readings, written reports. Prerequisite: Nine units of upper division Fren and graduate status.

**220. Explication de Textes** (2) II

An introduction to the analytical French approach to the detailed study literature. Demonstrations by instructor and students. This course aims to gi teachers of French a greater mastery of French language and literature. Prerequisit Nine units of upper division French and graduate status.

**290. Bibliography** (1) See Romance Languages

**298. Special Study** (1-3)

An individual study course designed primarily for candidates for the master degree.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

## GENERAL CULTURE

### IN THE DIVISION OF FOREIGN LANGUAGES

Major and minor work are not offered in general culture courses. These cours are carried as part of the offerings of the Foreign Languages Department. They a conducted in English and are open to all students. A knowledge of foreign language not required.

### Lower Division Courses

**(G)15. French Civilization** (2) I

The major currents and characteristics of French culture, as expressed throu the centuries in literature, art, philosophy, music and science. Conducted in Englis No prerequisite.

**(G)16. French Civilization** (2) II

Continuation of French 15. No prerequisite.

**(G)15. German Civilization** (2) I

The major currents and characteristics of German culture, as expressed throu the centuries in literature, art, philosophy, music and science. Conducted in Englis No prerequisite.

**)16. German Civilization (2) II**
Continuation of German 15. No prerequisite.

**)15. Spanish Civilization (2) I**
The major currents and characteristics of Hispanic life and culture, as expressed rough the centuries in literature, art, philosophy, music and science. Conducted in glish. No prerequisite.

**)16. Spanish Civilization (2) II**
Continuation of Spanish 15. No prerequisite.

### Upper Division Courses

**)115. French Civilization (2) I**
An advanced course in French culture of the past and present, with emphasis on e arts, philosophy, and literature. Lectures, class discussions, outside readings, writ- reports on individual topics. Conducted in English. Prerequisite: Sophomore anding.

**)116. French Civilization (2) II**
Continuation of French 115. Prerequisite: Sophomore standing.

**)115. German Civilization (2) I**
An advanced course in German culture of the past and present, with emphasis the arts, philosophy, and literature. Lectures, class discussions, outside readings, itten reports on individual topics. Conducted in English. Prerequisite: Sophomore nding.

**)116. German Civilization (2) II**
Continuation of German 115. Prerequisite: Sophomore standing.

**)115. Spanish Civilization (2) I**
An advanced course in Hispanic culture of the past and present, with emphasis the arts, pihlosophy, and literature. Lectures, class discussions, outside readings, itten reports on individual topics. Conducted in English. Prerequisite: Sophomore nding.

**)116. Spanish Civilization (2) II**
Continuation of Spanish 115. Prerequisite: Sophomore standing.

## GENERAL LANGUAGE

### IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in general language.

### Lower Division Courses

**Latin and Greek Word Derivation (3) I**
A general and elementary course in philology. A study of Latin and Greek roots most frequent occurrence in English, and of the English words derived from them. prerequisite. Not open to students with credit for English 20.

**Pronunciation of French, Italian and German (1-3) II**
A course designed especially for the use of singers, radio announcers, etc. No rerequisite. This course may be taken for one, two or three units of credit depending the individual student's need.

# GEOGRAPHY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *geography* for the A.B. degree. Course in the major are in addition to 45 units in general education courses. Lower divisio requirements: Geography 1, 2; Geology 1A-1B. Recommended: A reading knowledg of German and French. Upper division requirements: A minimum of 24 upper divisio units in geography, or 18 units in geography and six units selected from related field with approval of the chairman of the department. A minor is not required; however students are urged to complete one minor.

A *teaching major* is not offered in geography; however, courses in geograph may be used as part of the *social science major* for the general junior high schoo credential or the general secondary credential. For specific information, refer to thes credentials.

### Minor

A *minor in arts and sciences* is offered in *geography*. The minor consists of a minimum of 15 units of work in geography, or maximum of 22, six units of which must be i courses carrying upper division credit.

A *teaching minor* is not offered in geography for the general secondary credential however, it may be used as a part of the *social science minor* for the special secondary the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

**(G)1. Introduction to Geography: Physical Elements** (3) I, II

The nature of maps, weather and climates of the world; natural vegetation; lan forms and their associated soils, with reference to their climatic relationships; the sea and their coasts. One field trip. This course is classified as a natural science. (See general education requirements.)

**(G)2. Introduction to Geography: Natural and Cultural Regions** (3) I, II

The regional differentiation of the world by human activity; areal bases o economy and nationality. Prerequisite: Geography 1.

**3. Elementary Meteorology** (3) I, II

An elementary study of the earth's atmosphere and changes in it which produc our weather and influence human affairs. Special attention given to local conditions instruments, and records.

**(G)10. Economic Geography** (3) I, II

Beginning course in economic geography designed for commerce and economi majors. Prerequisite: Geography 1.

### Upper Division Courses

**112. Geography of California** (3) II

The physiographic regions of California and the cultural landscapes develope by the successive cultural groups. Prerequisite: Geography 1 or consent of instructor

**113. Climatology** (3) I (Not offered in 1951-52)

A survey of the principal classifications of climates of the world; regional characteristics of climate; relations to soils, vegetation, and human activities. Prerequisite: Geography 1 or consent of instructor.

**117. Geography of Northern and Eastern Europe** (3) I

A study of the cultural development of the countries of northern and eastern Europe in relation to physical background and historical evolution. Prerequisite Geography 1 or consent of instructor.

**18. Geography of the Mediterranean Area** (3) II

A study of the cultural development of the countries of Southern Europe, Western sia, and North Africa in relation to physical background and resources. Prerequisite: eography 1 or consent of instructor.

**19. Geography of South America** (3) II

A study of the physical regions and human geography of South America, includ- g a review of the history of colonization and the exploitation of resources. Pre- quisite: Geography 1 or consent of instructor.

**20. Geography of Middle America** (3) I

A study of the physical and human geography of Mexico, Central America, nd the islands of the Caribbean, including a review of the history of colonization nd the exploitation of resources. Prerequisite: Geography 1 or consent of instructor.

**21. Geography of North America** (3) II

The natural regions of North America, their formation and economic and istorical development. Prerequisite: Geography 1 or consent of instructor.

**24. Geography of Asia** (3) I

The cultural regions of Asia, their physical environment, and historical develop- ent. Prerequisite: Geography 1 or consent of instructor.

**25. Geography of the Pacific Basin** (3) II

A geo-political approach to the study of the islands in, and the lands marginal to, e Pacific Ocean. Prerequisite: Geography 1, or consent of the instructor.

**35. Geography of the San Diego Area** (3) II

Directed individual urban and rural field work in the San Diego area; the apping of a small area and making its geographic interpretations. Prerequisite: eography 1 and 2 or consent of instructor.

**G)145. Conservation of Natural Resources** (3) II

Nature and extent of mineral, soil, water, forest, and wild life resources and eir conservation; with particular emphasis on the United States, against a general ckground of world resources. Conservation philosophies and practices, and their ographic bases. Prerequisite: Geography 1 or consent of instructor.

**6. Honors Course** (Credit to be arranged) I, II

To be arranged after consultation with the chairman of the department. Refer to e Honors program.

**9. Special Study** (1-3) I, II

A special study course offered either semester for one to three units. May be taken r a maximum of six units by arrangement with the chairman of the department. Open ly to majors in geography.

### Graduate Courses

**0A-200B. Seminar** (2-2) Year, I

**0. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliog- phies, preparatory to the writing of a master's project or thesis.

**8. Special Study** (1-3)

An individual study course designed primarily for candidates for the master's gree.

**9. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

# GEOLOGY

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is not offered in geology. Students preparing for later professional training in geology should plan on completing Chemistry 1A-1B; Physics 4A-4B-4C; Mathematics 3A-3B; Engineering 1A-1B, 21A; and Geology 1A-1B, 21 and 22.

A *teaching major* is not offered in geology; however, courses in this field may be used as part of the *general science major* for the general junior high school credential. For specific information, refer to this credential.

### Minor

A *minor in arts and sciences* is offered in geology. The minor must include at least 15 units of work in geology, six units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in geology; however, courses in this field may be used as part of the *general science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

**1A. Physical** (4) I

The composition, origin, and distribution of earth materials, and their modification through mechanical and chemical process of change. Three lectures and one three-hour laboratory period weekly with related field study during the semester. (Not open to students who have had Geology 2.)

**1B. Historical** (4) II

Theories of earth origin, and the evolutionary history of the earth as traced through rock and fossil records. Consideration of the Paleontologic Sequence. Three lectures and one three-hour laboratory period weekly, with arrangement for field study and conference during the semester. Prerequisite: Geology 1A or equivalent.

**(G)2. General Geology** (3) I, II

Earth materials and processes, the development of land forms, and a brief consideration of the history of the earth. Open to all students except those with previous credit in geology. No prerequisites.

**(G)3. General Geology Laboratory** (1) I, II

Recognition of common earth materials with experience in both field and map relationships. Designed to accompany Geology 2, but entirely separate and complete in itself. One three-hour laboratory period weekly. Open to all students except those with previous laboratory credit in geology. No prerequisites.

**(G)4. Physiography of United States** (3) II

Geologic history and present features of the main physiographic provinces of United States. Prerequisite: Geology 1A or 2.

**21. Elementary Mineralogy** (4) I

Practice in the determination of common minerals and rocks, their geologic environment, utilization and economic significance. Two lectures and two three-hour laboratory periods weekly. No prerequisite.

**22. Advanced Mineralogy** (4) II

The application of the polarizing microscope and other techniques to the identification of minerals and rocks. Two lectures and two three-hour laboratory periods weekly. Prerequisite: Geology 21.

### Upper Division Courses

**100. Structural Geology** (3) I

The evolution and description of the structural and topographical features of the earth. Faulting, folding, and orogenic forces with practical illustrations from the North American Continent and California geologic conditions. Lectures, discussions and occasional field trips. Prerequisite: Geology 1A-1B or equivalent.

**01. Museum Work** (1-2) I, II

Selection and preparation of materials for the college museum collections. mphasis upon creation of self instructive displays for use on the elementary and econdary as well as the collegiate level. Prerequisite: Geology 1A-1B, and consent of he instructor.

**02. Geology of California** (2) II

Directed reading and group discussion of California geologic literature. Designed o acquaint the student not only with the important structural and geomorphic units f the State but with the variety of important source materials of geologic literature s well. Use of bibliographies, state and federal surveys, research publications, etc. rerequisite: Geology 1A-1B, and consent of the instructor.

**08. Field Geology** (1-4) I, II

Field instruction in geologic methods. Reconnaissance of adjacent unmapped reas with preparation of a geologic map and accompanying report. Work accomplished primarily on week-ends with minimum classroom activity during the week or organizational details. Prerequisite: Geology 1A-1B, and consent of the instructor.

**66. Honors Course** (Credit to be arranged) I, II

Special work in any of several phases of geologic science for students of demontrated ability. Refer to the Honors Program.

**99. Special Study** (1-3) I, II

Individual work in field, library, laboratory, or museum under staff supervision. pen only to qualified students upon consultation. Maximum credit, six units.

## GERMAN

### IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in German; however, students desiring carry advanced work in German should consult with the Chairman of the Department of Foreign Languages.

### Lower Division Courses

**G)1. Elementary** (3) I, II

Pronunciation, oral practice, readings on German culture and civilization, inimum essentials of grammar.

**G)2. Elementary** (3) I, II

Continuation of German 1. Prerequisite: German 1 or one year of high school erman.

**G)3. Intermediate** (3) I, II

Reading in German of cultural material, short stories, novels or plays; oral ractice; outside reading with oral and written reports. Prerequisite: German 2 or wo years of high school German.

**G)4. Intermediate** (3) II

Continuation of German 3. Prerequisite: German 3 or three years of high school erman.

**Intermediate** (2) I, II

A practical application of the fundamental principles of grammar by means of al and written work based on German texts. Prerequisite: German 2 or two years high school German.

**Intermediate** (2) II

Continuation of German 5. Prerequisite: German 5 or three years of high school erman.

**). Conversation** (2) I

Practice in the spoken language; practical vocabulary; conversation on assigned pics; simple dialogues and plays. Prerequisite: German 2 or two years of high hool German.

**11. Conversation** (2) II
Continuation of German 10. Prerequisite: German 10, or German 3, or thr years of high school German.

**(G)15. German Civilization** (2) I
The major currents and characteristics of German culture, as expressed throug the centuries in literature, art, philosophy, music and science. Conducted in Englis No prerequisite.

**(G)16. German Civilization** (2) II
Continuation of German 15. No prerequisite.

**D. Intermediate Review and Reading** (3) I
(Offered for last time in fall of 1951

Reading and composition; study of standard prose as basis for class worl collateral reading with written reports; German conversation, with texts read as basis; dictation. Prerequisite: German C or four years of high school German.

**8A-8B. Scientific Reading** (3-3) I
First semester, readings in scientific reader on chemistry, physics, etc.; occ sional written reports on scientific subjects read outside of class; sight readin Second semester, readings in special scientific or technical works; weekly writte reports required; sight reading. Prerequisite for 8A: German 2 with a grade of C two years of high school German; for 8B: German 8A or German 3, with a grade C, or three years of high school German.

### Upper Division

**101A-101B. Advanced Conversation and Composition** (3-3) Year, I
(Not offered 1951-52

Translation into German of moderately difficult English prose. Free compos tion in German, written and oral. Outside reading of modern German plays and pros dealing with various aspects of German life and culture, with written reports and or discussions in German. Oral and written practice in conversational German. Prerequ site: German 4 and 6, or their equivalent, with a grade of C.

**(G)115. German Civilization** (2) I
An advanced course in German culture of the past and present, with emphas on the arts, philosophy, and literature. Lectures, class discussions, outside reading written reports on individual topics. Conducted in English. Prerequisite: Sophomo standing.

**(G)116. German Civilization** (2) II
Continuation of German 115. Prerequisite: Sophomore standing.

## HEALTH EDUCATION

### IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

Work in health education leading to the general secondary credential is offer in connection with the general major. For a statement of requirements, refer to t general secondary credential.

### Minor

A *minor in arts and sciences* is offered in *health education*. The minor consis of a minimum of 15 units, or maximum of 22, nine units of which must be in cours carrying upper division credit. Courses will be determined in consultation betwe student and departmental representative.

A *teaching minor in health education* is offered for the general secondary ar the special secondary credentials. For a statement of requirements, refer to t credential.

### Lower Division Courses

**)21. Principles of Healthful Living** (2) I, II

An approach to the personal health problems of college students. Scientific alth information is provided, and an attempt is made to promote wholesome attitudes d desirable practices relating to healthful living. Required of all freshmen.

**. Community Health** (3) I, II

Community health problems; the role of the citizen, of the public, and of comnity health agencies in promoting and protecting the health of the community.

**)90. Physiology of Reproduction** (1) I, II

A series of lectures and discussions dealing with normal and abnormal physiology d anatomy of reproduction; facts and frauds in sex hygiene, and related topics. t open to students with credit for Home Economics 90.

### Upper Division Courses

**5. Safety Education and Accident Prevention** (3) II

Highway safety, the fundamentals of safety programs and techniques in home, ool and industry. Partially satisfies the requirements for state credential in driver ucation.

**1. Health Education for Teachers** (2) I, II

The teacher's function in the different aspects of the school health program; vironment, services, and instruction. Special attention is given to materials and terial sources, and to community relationships and resources. Separate elementary d secondary sections.

**2. Health Education Programs** (3) I

The construction of the health education program including objectives, scope d sequence of instruction, teaching methods, source materials and evaluation prolures; practice in building instructional units.

**3. Administration of the School Health Program** (3) II

Administrative responsibilities and procedures in organizing and conducting the ool health program. Principles, policies, and practices involved in instruction, serv-, environment, and community relationships. Partially fulfills Health and Developnt Credential requirement for nurses.

**. Special Study in Health Education** (1-3) I, II

Extensive review of pertinent literature, individual research, and advanced study problems in the profession. Credit will range from one to three units according to the e and amount of work. Approval of the Department Chairman required. Maximum dit, 6 units.

### Graduate Courses

**. Evaluation Procedures in Health, Physical Education and Recreation** (2) I

A study of tests and measurements in the profession with practice in their use, struction and interpretation of results.

**. Problems in Health Education** (2) I, II

Current problems in Health Education, studied through a review of the literature, cussion of trends, observation of school situations, together with the analysis and luation of actual problems. Written reports required.

**. Special Study** (1-3) I, II

An individual study course designed primarily for candidates for the master's ree

# HISTORY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *history* for the A.B. degree. Course in the major are in addition to 45 units in general education courses. Lower divisio requirements History 4A-4B, or 8A-8B, or 9A-9B, and either Political Science 1A-1B or 71A-71B, or Economics 1A-1B. Two of the above history courses are recommende for students planning to major in history, and it is suggested that History 4A-4B b included as one of them. No freshman shall enroll in more than one lower divisio course in history during any one semester without the permission of the departmen Upper division requirements: A minimum of 24 upper division units in history, inclu ing History 199, and a minimum of a year of concentration in each of three of th following fields: (a) Ancient and Medieval; (b) Modern Europe; (c) United States (d) Latin America; (e) Pacific Area and the Far East. These courses must be selecte under the guidance of the chairman of the department. A reading knowledge of on foreign language is strongly recommended.

A *teaching major* is not offered in history; however, courses in history may b used as part of the *teaching major in social sciences* for the general secondary an general junior high school credentials. For statement of requirements, refer to thes credentials.

### Minor

A *minor in arts and sciences* is offered in *history*. The minor must include a least 15 units of work in history, or maximum of 22, six units of which must be i courses carrying upper division credit, including a year-course.

A *teaching minor in history* is offered for the general secondary credentia Courses in history may be used as part of the social teaching science minor for th special secondary, general elementary, and kindergarten-primary credentials. For stat ment of requirements, refer to these credentials.

### Explanation of Courses

NOTE: History 17A-17B does not count toward credit for a major in history.

Any history course, with the exception of History 270A-270B, may be take either semester, the A part not being a prerequisite to the B part.

### Lower Division Courses

**(G)4A-4B. History of Modern Europe** (3-3) Year, I, II

A survey of European society, institutions and politics from about 1500 to t present. Fall semester: 1500-1799. Spring semester: 1799 to the present.

**(G)8A-8B. History of the Americas** (3-3) Year, I

Survey of the history of the western hemisphere from its discovery to the prese time.

**9A-9B. History of the Pacific Ocean Area** (3-3) Year, I

A general survey of the history and civilization of the peoples of the Pacific, wi special emphasis upon exploration, trade, international rivalries, and social evoluti of the island areas.

**(G)17A-17B. History of American Civilization** (3-3) Year, I

Survey of the political and social development of the United States, with empha upon the rise of American civilization and ideals.

### Upper Division Courses

**111A-111B. Ancient History** (3-3) Year, I

(Offered in 1951-52 and alternate year

Fall semester: Greek history to the Roman conquest. Spring semester: Roma history to the fifth century A.D.

### G)121A-121B. Medieval History (3-3) Year, I

(Offered in 1952-53 and alternate years)

Survey of the main events of European social, cultural, religious, political and conomic history, between 500 and 1400 A.D.

### 31A-131B. Renaissance, Reformation and Counter-reformation (3-3) Year, I

(Offered in 1951-52 and alternate years)

A history of personalities and events connected with the social, political, cultural, conomic and religious change between 1300 and 1600.

### 41. Europe in the Seventeenth and Eighteenth Centuries (3) I

(Not offered in 1951-52)

European thought, politics and international relations from the Thirty Years' Var and Louis XIV to the Seven Years' War.

### 42. The French Revolution and Napoleonic Era (3) II

(Not offered in 1951-52)

Study of conditions in France prior to 1789, the Revolution, 1789-1799, the organ-ation of France and Europe under Napoleon, character of his empire, and the reor-anization of Europe at the Congress of Vienna.

### 43A-143B. Europe in the Nineteenth Century (3-3) Year, I

Reaction in Europe, the development of nationalism, the impact of industrialism, nd the background of World War I. Covers period 1815-1914.

### 44A-144B. The World Wars (3-3) Year, I

(Offered in 1952-53 and alternate years)

Developments from 1914 to the present. Semester I: World War I, the peace ttlements, and the background of World War II. Semester II: World War II and its termath.

### 1A-151B. History of England (3-3) Year, I

Political, constitutional, social and economic developments since 1066. Designed r prelegal students, majors in English, and as a background for American History.

### 6A-156B. History of British Expansion (3-3) Year, I

(Not offered in 1951-52)

Study of the growth and development of the British Empire from the first over-as empire to the present. History 156B not open to students with credit for Political cience 160.

### 1. Mexico and Caribbean Countries (3) I

Special attention to relations between the United States and these countries, and recent developments in Mexico.

### 2. South America Since Independence (3) II

Republics of South America. Development of nationality, struggles for political ability, exploitation, diplomatic and commercial relations with the United States, and her international problems of South America. Survey of present-day conditions.

### 1A-171B. Rise of the American Nation (3-3) Year, I

(Offered in 1952-53 and alternate years)

Semester I: English colonization in North America, development of colonial stitutions and political customs, and areas of international conflict during 18th cen-ry. Semester II: The Revolution and establishment of the government under the nstitution of 1787. Covers period to 1814.

### )172A-172B. Constitutional History of the United States (3-3) Year, I

Colonial governments, formation of the national Constitution, historical develop-nt of constitutional government, and significant phases of American constitutional w. Not open to students with credit for Political Science 139A and 139B.

### 3A-173B. The Expansion of the United States (3-3) Year, I

(Offered in 1951-52 and alternate years)

Lectures and readings on Jacksonian democracy, territorial expansion and the exican War, the slavery controversy, Civil War and Reconstruction, and attention to e growth and progress of the United States to the close of the nineteenth century.

**175A-175B. The United States in the Twentieth Century** (3-3) Year, I

The rise of the United States to the position of a world power; social and economic problems posed by the machine age; political action and adjustment, actual and proposed, intended as solutions for these problems.

**176A-176B. History of American Foreign Policy** (3-3) Year, I

Lectures and readings in the field of American foreign relations since 1776, with special emphasis, in the second semester, upon affairs since 1900. A general survey course. Not open to students with credit for Political Science 158A-158B.

**(G)179A-179B. Intellectual History of the American People** (3-3) Year, I

A study of the ebb and flow of ideas in the United States since the founding o the English colonies, with special attention devoted to social and political thought.

**181A-181B. History of the West** (3-3) Year, I

The American frontier: Expansion, exploration, settlement and building of th new states, with emphasis upon frontier problems of defense, communications, finance etc.; the development of cultural institutions. A critical examination of the causes effects and results of the frontier experiences of the American people.

**189. History of California** (3) I, II

The economic, social, intellectual, and political development of California fron the earliest times. Emphasis will be on the founding of California, internationa struggles for California; American conquest and Gold Rush Era; development o California as a state.

**191A-191B. History of the Far East** (3-3) Year, I

Particular emphasis during the first semester upon the history, both interna and international, of the Far East through the nineteenth century. The second semeste will be devoted to a consideration of developments in the twentieth century.

**192. History of Russia** (3) II

A general survey emphasizing the period since Peter the Great; the Russia Empire's relations with its national minorities; Tsarist experiments in political an social reform; revolutionary socialism; the development of the U. S. S. R.

**193. History of China** (3) I (Offered in 1952-53)

A survey of Chinese history and institutions from antiquity to the present.

**194. History of Japan** (3) I (Offered in 1951-52 and alternate years)

A general survey of the political, economic and social development from th foundation of the empire to contemporary times. Special attention will be given t religions, philosophy, literature, and the arts.

**199. Special Course for Advanced Students** (3) II

Required of all students with a history major in liberal arts and those workin toward a General Secondary credential with a history major. To be attended durin the senior year. Open to social science majors.

## Graduate Courses

**270A-270B. Seminar** (2-2) Year, I

Required of all candidates for the General Secondary credential with a histor major, and for the M.A. degree in history. Prerequisites: 16 to 18 units in upper div sion history, including 199, or permission of instructor. 270A is a prerequisite for 270 Open to candidates for the M.A. degree in social science, with consent of instructo

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliogr phies, preparatory to the writing of a master's project or thesis.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

# HOME ECONOMICS

## IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is not offered in home economics at this time; how-
er, all lower division requirements for a major can be met during a two-year period.
pper division courses are also offered and are being added to the program as rapidly
facilities permit.

Students may elect a general major with one of the fields of concentration in
me economics. For specific information, refer to the Home Arts Curriculum in the
tion of the bulletin entitled: Preprofessional and Vocational Curricula.

A *teaching major* is not offered in home economics; however, students planning
complete requirements for a special secondary credential in home economics should
e the following courses in addition to courses in home economics: Chemistry 2A-2B.
commended: Physics 2A-2B, Biology 1 or 3, Zoology 165, English 2A, History
A-17B or Political Science 71A-71B, Health Education 90, Art 6A, 8, and 61B,
isiness 20, and Sociology 135.

### Minor

A *minor in arts and sciences* is offered in *home economics.* The minor consists of
minimum of 15 units, or maximum of 22, nine units of which must be in courses
rrying upper division credit. Lower division requirements: Home Economics 5 or
and 10 or 11. Upper division requirements: Home Economics 105 or 100, 150 and
0. Electives may be chosen from Home Economics 1, 55, 61A, 101, 135, and 160A.

A *teaching minor in home economics* is offered for the general secondary, general
ior high, and special secondary school credentials. For statement of requirements,
er to these credentials. A student with a minor in home economics may teach home
nomics in junior high school with a general junior high school credential. Through
nseling with the adviser in home economics, a student may so extend the minor in
me economics that the special secondary credential in home economics may be
tained with a minimum amount of additional work in the field.

### Lower Division Courses

**)1. Home and Family Life** (3) I, II
A general education course in family life education. Consideration of necessary
paration for marriage with emphasis on a stable, happy democratic family life;
nily budgets and money management; finding a home to buy, build or rent; child
re, proper training and guidance; home safety. Open to men and women.

**)2. Foods** (3) I
A general education course in practical arts. Deals with the problems faced in
nning meals in which the foods are well cooked and appetizing and serving meals
ways suited to the family situation; safety in the kitchen. Nutrition, economic and
nagement problems are stressed. One lecture and two laboratory sections per week.

**)10. Clothing Fundamentals** (3) II
A general education course in practical arts. Selection of clothing with self-
alysis as a basis; wardrobe planning and buying procedures. Commercial patterns
l their adaptation; fitting and construction principles applied to cottons.

**Advanced Clothing** (3) I
Fitting and construction processes applied to wool, silk, and synthetics, empha-
ing fundamental principles of handling. Prerequisite: Home Economics 10 or
uivalent.

**Household Equipment** (2) II
Selection, methods of operation and care of household appliances. Equipment of
ious types used and tested for safety, efficiency and cost of operation. Efficient
chen arrangement and storage space in relation to the well-being of the family.

**A. Nutrition** (2) II
Practical problems of nutrition including food requirements, food selection, and
d habits. (For men and women.)

**61B. Nutrition Laboratory** (1) II

Nutrition principles applied to food preparation, meal preparation and specia diets. Open to prenursing students. One three-hour laboratory section per week.

**62. Food and Nutrition** (3) II

Selection, purchase, and service of meals with a consideration of nutritiona needs of family groups, food habits and social customs. Open to all students excep prenursing students.

**90. Physiology of Reproduction** (1) I, II

A series of lectures and discussions dealing with normal and abnormal physiology and anatomy of reproduction; facts and frauds in sex hygiene, and related topics Not open to students with credit for Health Education 90.

### Upper Division Courses

**100. Advanced Clothing Design (Tailoring)** (3) II

Principles of tailoring; planning and construction of coats and suits. Prerequisite: Home Economics 11.

**101. Clothing Selection** (3) I

Aims to develop taste in dress through a better understanding of the relation o art principles, psychology, fashion trends, personality and physical characteristics t individuals. History of costume is studied briefly as an aid in understanding recurrin cycles in fashion. A consideration of buymanship information necessary in wardrob selection to insure satisfaction and economy.

**105. Family Meals** (3) II

This course deals with the planning, preparing, and serving of attractive, well balanced meals for different income levels, and for various occasions. The student wil have responsibility for menu making, food purchasing, and meal management.

**120. Demonstration Methods** (1) Irregular

Class discussions and demonstrations with emphasis upon individual experienc in organizing demonstration materials and in acquiring demonstration techniques Observation and evaluation of professional demonstrations. Prerequisite: Nine unit in Home Economics courses.

**(G)135. Marriage and the Family** (3) I, II

Preparation for marriage. Prediction scales for evaluating success or failur in marriage. Parent-child relationships; factors in successful and unsuccessful marriages; higher education and the birth rate; married women in industry and professions; desertion and divorce. Not open to students who have credit for Sociolog 45 or 135. A general education course in social science or in family life education

**(G)150. Home Management** (3) I, II

A general education course in family life education. Integration of the learnin activity around a living situation with emphasis on cooperation and establishment o family goals. Management for more successful use of the resources of time, energy, an money to enrich personal and family life; use of credit, value of insurance and balancing budgets. Open to men and women.

**160A. Merchandise Analysis—Textiles** (2) I

Properties, uses, selection and care of textile fibers and fabrics. The aim is t develop judgment in the evaluation involved in the selection of textiles. (Open to me and women.)

**160B. Merchandise Analysis—Nontextiles** (2) II

Properties, uses, selection and care of metals, glass, rubber, fur, enamels and plastics. (Open to men and women.)

**161. General Textiles** (2) II

Factors involved in fundamental weaves, fabrics, color, and finishes with reference to selection of fabrics for home decoration and clothing. Relationships to durability and cost are emphasized. Open to all students except merchandising majors.

**(G)170. Child Care and Development** (3) I

A general education course in family life education. A study of the prenatal and preschool periods of child development; particular emphasis is given to the nutrition and physical development of the young child. Directed observation and participation in the nursery school.

# INDUSTRIAL ARTS
## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is not offered in industrial arts at this time; how-er, all the lower division requirements can be met during a two-year period. pper division courses are also offered as facilities will permit and other courses are anned and will be added as soon as possible. Courses are designed for two objec-ves: (1) leading toward professional education with a special secondary credential, nd (2) for general education. The General Shop courses are designed to contribute better family living and in them special emphasis is given to individual interests nd objectives. Some of the other courses, while designed for prospective teachers, ould also prove valuable to students desiring practical shop training on an elective sis.

A *teaching major* is not offered in industrial arts at this time; however, students anning to complete the special secondary credential in industrial arts should take e following courses in the lower division in addition to the general education quirements: Mathematics C, D, and E, unless completed in high school; Chemistry A, or a year of high school chemistry; Physics 2A-2B; Art 2; Speech Arts 4; Indus-ial Arts 2 or 21 and 51 or 52; Industrial Arts 31 or 32, 61 and 71.

### Minor

A *minor in arts and sciences* is offered in industrial arts. The minor must include least 15 units of work in industrial arts, nine units of which must be from courses rrying upper division credit.

A *teaching minor* in industrial arts is offered for the general junior high, special condary, and general secondary credentials. Industrial arts may also be used as a cond minor for the general elementary credential. For specific information, refer to e outline of requirements for these credentials.

### Lower Division Courses

**Mechanical Drawing** (3) I, II, Summer

Use and care of drafting equipment, freehand lettering, technique of the finished awing including inking, simple orthographic projection, introduction to dimen-oning problems, simple section and auxiliary views, fundamentals of pictorial drawing isometric, oblique, and cabinet projection. One lecture and two laboratory sections r week. Not open to students with credit for Engineering 2.

**G)5. Introductory General Shop** (3) I

A general education course in practical arts utilizing tools and material of indus-ial arts to gain understanding of the industrial age. Students will explore their ilities by solving practical problems. Activities include individual and group prob-ms, field trips, and audio-visual aids.

**G)6. Intermediate General Shop** (2) II

A general education course in practical arts. An approach similar to that of dustrial Arts 5 will be used. Students may select problems to meet their needs, terests, and objectives. Safety consciousness and good work habits will be empha-zed.

**. Industrial Drafting** (3) II

Introduction to industrial drafting procedures. Principles of orthographic pro-ction as applied to aeronautical and machine drawings, sheet metal, furniture and lated production drawings, and electrical and pipe layouts. One lecture and two boratory sections per week. Prerequisite: Industrial Arts 2 or one year of high school echanical drawing.

**31. Elements of Metalwork** (3) I

Demonstration and practice in the use of hand tools commonly used in bench an sheet metal including fundamentals of pipe fitting and welding. Discussion of th principles and techniques of metalworking for the prospective shop teacher. One lecture and two laboratory sections per week. (Required for the Special Secondary credential in Industrial Arts.)

**32. Elements of Machine Operation** (3) I, II

Demonstration and practice in the safe operation of machine shop equipmen including drill, milling machine, shaper, and precision grinder for the shop teache May be substituted for Industrial Arts 41 to meet requirements for the Special Secondary credential in Industrial Arts. One lecture and two laboratory sections per wee

**51. Elements of Woodwork** (3) II

Training in the use of hand tools commonly used in the woodshop. Discussion an demonstration of the principles and techniques of woodwork and woodworking machine for the teacher. One lecture and two laboratory sections per week. (Required for th Special Secondary credential in Industrial Arts.)

**52. Advanced Woodwork** (3) I

Demonstration and practice in the safe operation of woodworking machine including the lathe and in the fundamentals of furniture joinery. Training in settin up and maintaining machines. One lecture and two laboratory sections per week. Prerequisites: Industrial Arts 51 or one year of high school woodwork.

**61. Elements of Electricity** (3) II

Demonstration of the basic principles of electricity as related to the home and t industry; practice in the use of tools, meters and materials in the laboratory and a applied to home appliances and the design and construction of simple devices suitabl to the high school shop. One lecture and two laboratory sections per week. (Require for the Special Secondary credential in Industrial Arts.)

**62A-62B. Applied Electronics Laboratory** (3-3) Year, I

(May not be offered in 1951-52

Practice in the construction and testing of electronic devices, such as radi receivers, television receivers, photocell systems, vacuum tube voltmeters, special control, and testing devices. Two hours of discussion and six hours of laboratory per wee Prerequisite: Industrial Arts 61 or permission of instructor.

**71. Elements of Transportation Machinery** (3) I

Demonstration and study of the theory of internal combustion engines as applie to transportation. Practice in maintenance, tune up and minor repair of automobile Consideration of the problems of safe driving and the development of the necessar habits and attitudes. Two lectures and one laboratory section per week. (Required fo the Special Secondary credential in Industrial Arts.)

## Upper Division Courses

**121. Advanced Mechanical Drawing** (3) I, II, Summer

Lettering practice, orthographic and isometric projection of machines and part and of furniture. Theory and practice of dimensioning, working and production drawings, reproduction and principles of perspective. Intended for the prospective teache One lecture and two laboratory sections per week. Prerequisite: Industrial Arts 2

**131. Advanced Metalwork** (2) I, II

Additional demonstration and practice on metalworking machines includin press work, welding and forging, sheet metal forming, metal spinning and pipe layou and fitting. Two laboratory sections per week. Prerequisite: Industrial Arts 5 or 3

**133A-133B. Advanced Machine Shop Practice** (3-3) Year, I, II

A year course in the principles and practice of machine tool operation stressin tool making, instrument work and modelmaking. One lecture and two laboratory sections per week. Prerequisite: Industrial Arts 32 or permission of instructor.

**136. Forging and Welding** (2) (May not be offered in 1951-52)

Principles and techniques of forging and welding including oxy-acetylene an electrical as applied to repair work and the fabrication of ornamental metal worl Two laboratory sections per week. Prerequisite: Industrial Arts 5 or 31.

**1A-151B. Furniture and Cabinet Making** (2-2)

(May not be offered in 1951-52)

A year course in advanced woodwork problems. Design and construction of furni-
e and mill cabinet work. Two laboratory sections per week. Prerequisite: Industrial
ts 51 or 52.

**1. Finishing and Painting** (2) I

Theory, demonstration and practice of a wide variety of wood and metal finishing
cesses, including fillers, stains, varnishes, enamels and lacquers. Two laboratory
tions per week. Prerequisite: Industrial Arts 5 or 51 or 52.

**. Patternmaking and Woodturning** (3) II

Demonstration and practice of the principles of patternmaking and woodturning.
velopment of skill in woodturning operations. One lecture and two laboratory sec-
ns per week. Prerequisite: Industrial Arts 51 and 52 or equivalent.

**. Experimental Shop** (1 or 2) I, II

Individual shop work on complex projects on an experimental basis. Prerequisite:
mission of the instructor.

**. Industrial Arts Organization and Management** (2) II

(May not be offered in 1951-52)

Study of the organization of Industrial Arts in secondary schools, review of
ject requirements and methods of developing student participation in shop manage-
nt. Two lectures per week.

**. Recent Trends in Industrial Arts Education** (2) I

(May not be offered in 1951-52)

Survey of current trends and practices in the field of Industrial Arts in Secondary
ication. There will be opportunity for individual work on related problems of
erest to member of the class. Two lectures per week.

## JOURNALISM

### IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *journalism* for the A.B. degree. Courses
he major are in addition to 45 units in general education courses. Lower division
uirements: Journalism 51A-51B, Physical Science 10, Speech Arts 81, Business
or equivalent performance in typing. Recommended: Business 27, Economics 1A-
General Language 20, English 61. Upper division requirements: 24 upper divi-
units in journalism to include Journalism 102 and 151. A minor is not required.

### Minor

A *minor in arts and sciences* is offered in journalism. The minor must include at
t 15 units of work in journalism, nine units of which must be from courses carrying
er division credit.

A *teaching minor* is not offered in journalism.

### Lower Division Courses

**. Elements of Journalism** (3) I

Theory of news writing; introduction to the newspaper as an institution in
ern society. Prerequisites: Sophomore standing and grade of B in freshman com-
tion, or consent of instructor; and Business 2A (may be taken concurrently) or
valent, with 30-word-per-minute performance.

**. News Gathering and Reporting** (3) II

Practice in writing news copy, both for class criticism and for publication in
*Aztec.* Prerequisite: Grade of C or better in Journalism 51A.

**Special Projects** (1-3) I, II

Special work in journalism by arrangement with instructor. Work on *The Aztec,*
book, other publications, with consent of instructor. (NOTE.—A maximum of six
s of Special Projects allowable toward the major or minor in journalism. As elec-
credit, such units not limited except at instructor's discretion.)

## Upper Division Courses

**101. Writing for the Business Press** (3) II

Practice in gathering material and writing articles for the business press. Production of eight articles and marketing of at least one article required. Prerequisite junior standing, plus consent of instructor.

**102. Law of the Press** (3) II

Understanding of the law as it affects the privileges and defines the duties anc responsibilities of the press. Problems of constitutional law, libel, privacy, and posta regulations pertinent to the press, with emphasis on the covering of public affairs.

**106. Creative Writing** (3) I

A writing workshop in which students are given opportunity to criticize eacl other's work. Emphasis on narrative and description, but freedom to pursue whateve writing forms may interest the student most. May be taken a second time with nev material. Not open to students with credit for English 106.

**122. Public Opinion Measurement** (3) II

The history, methods, and problems of public opinion and attitude measurement. Emphasis will be placed upon the polling of consumers and voters. Students wil be given field experience. Not open to students with credit for Psychology 122.

**132. Propaganda and Public Opinion** (3) II

A study of the forces which mold the American public mind, the practice o propaganda, a description and analysis of public relations, pressure groups and thei effect in American public life. Not open to students with credit for Political Scienc 122.

**151. Advanced Editing and Reporting Techniques** (3) I

Editing copy, writing headlines, making up pages, handling telegraph copy. Pra tice in specialized forms of journalistic writing. Prerequisite: Journalism 51A-51

**162. Magazine Fiction** (3) I

Coaching in constructing and writing short stories for commercial publication Admission with consent of instructor. Not open to students with credit for English 16

**166. Honors Course** (Credit to be arranged) I, II

Special study open to members of the Honors Program in journalism. Refer the Honors Program.

**183. Radio Continuity and News Writing** (3) II

Correlates news editing and writing with announcing styles. Radio news pr cedure and organization of a radio news staff; analysis of repertorial and commenta styles. Includes production techniques of "on-the-spot" and multiple point pick broadcasts. Registration with consent of the instructor. Not open to students wi credit for Speech Arts 183.

**185. Advertising Copy and Layout** (2) I

Introduction to principles and techniques of copy writing; types of copy; prep ration of layouts; mechanical methods employed by the artist, engraver and printe legislation and regulations affecting advertising claims. Prerequisite: Business 27, consent of instructor. Not open to students with credit for Business 185.

**191A-191B. City and County Newspaper Practice** (1 to 3-1 to 3) Year, I,

A special course in applied journalism during which students work on near daily and weekly newspapers by special arrangement with editors. Prerequisite: Jou nalism 51A and 51B with grade of B, *plus* permission of instructor.

**192. Special Projects** (1-3) I, II

Special work in journalism by arrangement with instructor. Work on *The Azt* yearbook and other publications, with consent of instructor. (See "Note" under Jou 92, above.)

**199. Special Study** (1-3) I, II

Students who have demonstrated ability in journalism studies may enroll f work other than that outlined in the regular courses. Admission only with consent the instructor with whom the work is to be done. Maximum credit, six units.

# LATIN

## IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* and *minor* work are not offered in Latin.

### Lower Division Courses

**G)1. Elementary** (3) I, II
Study of the Latin language and Roman culture, with reading of selected prose ssages.

**G)2. Elementary** (3) I, II
Continuation of Latin 1. Prerequisite: Latin 1 or one year of high school Latin.

**G)3. Intermediate** (3) I
Reading of selected passages emphasizing the contribution of the ancient culture our own. Prerequisite: Latin 2 or two years of high school Latin.

**G)4. Intermediate** (3) II
Continuation of Latin 3. Prerequisite: Latin 3 or three years of high school atin.

# LIBRARY SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

*Major* and *minor* work are not offered in library science.

### Lower Division Courses

**G)10. Use of the Library** (2) I, II
The chief object is to give a working knowledge of some of the resources of the rary which every teacher and student should understand—the decimal classifican, the card catalog, periodical indexes, and the most important reference books, gether with some instruction in the preparation of bibliographies. The course will a requirement of those students added to the library's staff of student assistants, hough it will not prepare the student to become a librarian. A general education urse in practical arts.

# LIFE SCIENCE

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in *life science* for the A.B. degree. Courses the major are in addition to 45 units in general education courses. Lower division quirements: Zoology 1A-1B or Biology 3 and 4; Zoology 20 or Physiology 1A; tany 2A-2B or 1 or Bacteriology 1; Chemistry 1A-1B or 2A-2B; Physics 2A-2B. per division requirements: A minimum of 24 upper division units in zoology, cteriology and botany of which six units may be from a related field. The plan for s major must be with the approval of the Chairman of the Division of Life Sciences. minor is not required of students majoring in life science.

A *major in arts and sciences* is offered in *life science* for the B.S. degree. Courses the major are in addition to 45 units in general education courses. Lower division uirements: Bacteriology 1 or 101, Botany 2A-2B, Zoology 1A-1B, Chemistry -1B or 2A-2B, Physics 2A-2B. Upper division requirements: 36 upper division its in zoology, bacteriology and botany or 27 units in these fields with nine units a related field. The plan for this major must be with the approval of the Chairman the Division of Life Sciences. A minor is not required of students majoring in life ence.

Note: Twelve units in natural science courses in the major for the A.B. or S. degree may be counted toward pattern requirements in general education natural ence courses.

A *teaching major in life science and general science* is offered for the gener secondary school credential and a *teaching major in general science* is offered for t general junior high school credential. For statement of requirements, refer to the credentials.

### Minor

A *minor in arts and sciences* is offered in *life science.* Lower division requir ments: Biology 3 and 4 or equivalent; Physical Science 1 and 2; Physiology 1 Upper division requirements: Botany 114 and 150; Zoology 119 and 160.

A *teaching minor in life science and general science* is offered for the gener secondary, special secondary, general elementary, and kindergarten-primary credential For statement of requirements, refer to these credentials.

## MARKETING

### IN THE DIVISION OF BUSINESS

### Major

A *major in arts and sciences* is offered in *business* for the A.B. degree with speci ization in marketing. Courses in the major are in addition to 45 units in general educ tion courses. Lower division requirements: Business 8, 14A-14B, 18A-18B, 20, 24, 2 27, and Art 7. If the student does not elect a minor in economics, Economics 1A-1 should be taken as an elective or as part of his program in general education.

Upper division requirements: 24 upper division units to include Business 12 Economics 140, one of the following courses: Business 123, 153, Economics 111, 17 and 15 units chosen from Business 120, 123, 124, 137, 153, 154, 181, 184, 185, 18 187A, 187B, 188, 189, 196, 198A, 198B, Home Economics 160A-160B, Art 107. ( Business 20 and Art 7 are not taken in the lower division, Business 120 and Art 1 are required in the upper division.) A minor is not required, but the student encouraged to complete a minor in one field other than business.

A *teaching major* is not offered in the marketing field, but is offered in *busin education.* Marketing may be included as the areas of specialization.

### Minor

A *minor in arts and sciences* is offered in *business* with specialization in mark ing. The minor consists of a minimum of 15 units, or maximum of 22, six units which must be in courses carrying upper division credit. Students electing business a minor with specialization in marketing should consult with the adviser in marketi for selection of courses.

A *teaching minor* is not offered in business, but is offered in *business educati* for the general secondary school credential. For statement of requirements, refer the credential.

### Courses in Marketing

All business courses in this department for the major or minor are listed in t section of the bulletin under Business.

## MATHEMATICS

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in *mathematics* for the A.B. degree. Cour in the major are in addition to 45 units in general education courses. Lower divis requirements: Mathematics 1, or equivalent (unless exempted by examination); Ma ematics 3A-3B and 4A. Recommended: Business 2, Engineering 1A, 21; Phys 4A-4B or Physics 2A-2B, 3A-3B. A reading knowledge of French or German is de able. Upper division requirements: A minimum of 24 upper division units in mat matics to include Mathematics 117 (unless taken as Mathematics 4B in the lo division); 111, 119, 121, and either 105 or 106. Six units of the remaining nine u may be selected from upper division courses in related areas with the approval of department. A minor is not required, but is recommended.

A *teaching major* is offered in mathematics for the general junior high school lential and for the general secondary credential. For specific information, refer to outline of requirements for these credentials.

## Minor

A *minor in arts and sciences* is offered in *mathematics*. The minor consists of a nimum of 15 units, or a maximum of 22, six units of which must be in courses carry- upper division credit. The selection of courses must be approved by the department.

A *teaching minor* is offered in mathematics for the general secondary, the special ondary, the general elementary, and the kindergarten-primary credentials. For cific information, refer to the outlines of requirements for these credentials.

## Lower Division Courses

**Basic Mathematics** (3) I, II

Fundamentals of mathematics with applications to everyday problems. Required ll students failing the competency examination in mathematics. Not open for credit tudents passing this examination.

**Elementary Algebra** (3) I, II

Fundamentals of algebra. Not open for credit to students who have credit for one r of high school algebra.

**B. Plane Geometry** (3) I, II

Fundamentals of plane geometry. Not open for credit to students who have credit one year of high school geometry. May be counted toward general education in hematics.

**Intermediate Algebra** (3) I, II

An extensive review of elementary algebra followed by quadratic equations, ultaneous equations, ratio and proportion, variation, progressions, etc. Prerequi-: Elementary algebra and geometry or Mathematics A-B.

**Trigonometry** (3) I, II

Plane trigonometry with special attention to logarithms and those aspects needed nalytic geometry and the calculus. Prerequisite: Mathematics C or its equivalent.

**Solid Geometry** (2) II

Properties of lines and planes. Calculation of areas and volumes. Prerequisite: hematics C or its equivalent.

**G. Mathematics for General Education** (3) I, II

Basic concepts of arithmetic, algebra, and geometry with applications. Recom-ded for students whose scores on the competency examination, while exempting n from Mathematics X, indicate a need for further training in mathematics. A eral education course in mathematics.

**Slide Rule** (1) I, II

Theory and use of the slide rule. Practice in performing the fundamental opera-s of arithmetic. Some attention is given to more involved computations. Prerequi-t: Trigonometry or Mathematics A-B or equivalents.

**Algebra and Trigonometry** (3) I, II

Review of algebra and trigonometry. Further study of identities, graphs, solu- of algebraic and trigonometric equations, determinants, and mathematical proofs. requisite: Two years of high school algebra and trigonometry.

**Analytic Geometry** (3) I, II

Equations and loci, conic sections, coordinate transformations, Cartesian and r coordinates, and parametric representation. Prerequisite: Mathematics 1 or onometry and passing of qualifying examination. (Qualifying examination will be n during the first week of the semester.)

**First Course in Calculus** (3) I, II

Introduction to differential and integral calculus with applications. Prerequisite: hematics 3A.

**4A. Second Course in Calculus (3) I, II**

Differentiation, integration, infinite series, and applications. Prerequisit Mathematics 3B.

**4B. Third Course in Calculus (3) I, II**

Partial differentiation, successive integration and applications. Prerequisit Mathematics 4A. (Solid geometry is recommended.) Not open to students with cred for Math. 117.

**(G)7A. Mathematical Analysis (3) I**

Designed for students who do not intend to prepare for a professional career physical science or in engineering. Consideration is given to the processes and applic tions of algebra and trigonometry. Prerequisite: High school algebra and plane geo erty. Students with credit for Mathematics 1 will not receive credit for Mathemati 7A. This course may be counted toward general education in mathematics.

**(G)7B. Mathematical Analysis (3) II**

A continuation of Mathematics 7A including the concepts and applications analytic geometry and an introduction to the calculus. Prerequisite: Mathematics 7 Students with credit for Mathematics 3B will not receive credit for Mathematics 7 This course may be counted toward general education in mathematics.

## Upper Division Courses

**(G)104. History of Mathematics (3) II**

History of mathematics down to early modern times. This course may be count toward general education in mathematics.

**105. College Geometry (3) I**

A synthetic treatment of the points and lines associated with triangles and qua rilaterals, similarity, inversion, ruler and compass construction, etc. Highly reco mended for all teachers of high school geometry. Prerequisite: Mathematics 3B or 7

**106. Projective Geometry (3) I**

Concurrence of lines, collinearity of points and other properties of figures n altered by projections; construction and study of ellipses, hyperbolas, and parabolas means of projections. Prerequisites: Mathematics 3B or 7B and permission instructor.

**111. Theory of Algebraic Equations (3) I, II**

Determinants, complex numbers, and theory of algebraic equations. Prereq site: Mathematics 3B or 7B.

**112. Analytic Geometry of Space (3) II**

The coordinate systems in space; lines, planes, and quadric surfaces; applic tions. Prerequisite: Mathematics 4A.

**117. Intermediate Calculus (3) I, II**

Essentially the same as Mathematics 4B. Additional special work for advanc students may be assigned. Prerequisite: Mathematics 4A. Not open for credit to st dents with credit for Math. 4B.

**118A. Advanced Mathematics for Engineering Students (3) I**

Introduction to differential equations, vector analysis, Fourier series, hyperbol elliptic, and Bessel functions. Prerequisite: Mathematics 117 or its equivalent.

**118B. Advanced Mathematics for Engineering Students (3) I**

Introduction to partial differentiation, partial differential equations, line a surface integrals, complex variables, etc. Prerequisite: Mathematics 118A.

**119. Differential Equations (3) I, II**

Ordinary differential equations with applications to geometry, physics, and che istry. Prerequisite: Mathematics 117 or its equivalent.

**121. Advanced Calculus (3) II**

Review of the fundamental concepts of the calculus, partial differentiation, seri line and surface integrals, etc. Prerequisite: Mathematics 118A or Mathematics 1

**1I. Vector Analysis** (3) I

Vector algebra, differentiation of vectors, gradient, divergence, and curl. Applica- tns to geometry and physics. Prerequisite: Mathematics 117 or its equivalent.

**0A. Mathematical Statistics** (3) I

Graphical and arithmetical characterization of observed frequency distributions, ments, use of normal curve, curve fitting, correlation, etc. Prerequisite: Mathe- tics 3B.

**0B. Mathematical Statistics** (3) II

Theoretical discrete and continuous distributions, multiple and partial correla- n, large and small sample theory including student's T, Chi-square, and the F distri- tions with applications. Prerequisites: Mathematics 140A and 117 or their equiv- nts.

**0. Special Study** (1-3) I, II

Supervised individual study in selected mathematical topics. Maximum of six its allowed. Prerequisite: Consent of the instructor.

### Graduate Courses

**21. Concepts of Geometry From an Advanced Viewpoint** (2) I

An introduction to the fundamental concepts of geometry and the processes of thematical thinking in this area. Recommended for candidates for the general ondary credential. Prerequisite: One upper division course in geometry.

**22. Concepts of Algebra From an Advanced Viewpoint** (2) II

An introduction to the fundamental concepts of algebra and the processes of thematical thinking in this area. Recommended for candidates for the general ondary credential. Prerequisite: One upper division course in algebra.

**2I. Advanced Work in the History of Mathematics** (2) I

Intensive study of specific phases of the history of mathematics with attention t implications for teaching mathematics. Prerequisite: Mathematics 104.

**2I. Functions of a Complex Variable** (3) I

Operations on complex numbers, limits, convergence, continuity, differentiation, egration, Cauchy's Theorem, power series, elementary functions, etc. Prerequisite: thematics 118A or 119 and consent of the instructor.

## MUSIC

### IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is offered in *music* for the A.B. degree. Courses in e major are in addition to 45 units in general education courses. Several plans of udy are available with varying degrees of emphasis on performance, history and erature, creative activity, and teaching.

The music curricula are designed to fulfill the needs of all students: (1) Those o have professional ambitions in musical performance, or seek a foundation for grad- te study leading to college or university teaching, (2) those who are preparing for e of the several state teaching credentials with music as either a major or minor, ) those whose major professional interest is in another department and are seeking sical study as a minor, and (4) those who are interested in music as an elective study a for the enrichment of their cultural background.

General basic requirements for the degree with a major in music to be met by all sic students, are as follows: Demonstration of proficiency in vocal or instrumental *formance* at a level of difficulty comparable to the Bach two-part inventions or the ier Haydn sonatas for the piano before admission to the major may be granted; devel- nent, through class or individual instruction, of *performance ability* and appearance soloist in at least one student recital during each of the last four semesters; ele- ntary keyboard technique (the student's attention is directed to the prerequisites f certain courses, to the Music 10A-B-C-D requirement and to the credential require- nts listed earlier in the bulletin under Professional Curricula in Teacher Educa- n); as laboratory experience participation in one vocal *and* one instrumental activity *each* semester excepting the semesters in which the credential candidate is enrolled i cadet teaching (in special cases this requirement may be waived by the chairman the Music Department) ; during the semesters of cadet teaching the student is require to enroll in one music activity. A maximum of eight units of credit from music activitie may be used toward graduation. The maximum credit permitted toward graduatio from any combination of intermediate class, advanced class and individual instructio in solo performance is eight units. Attention is directed to the statement followin the course descriptions in which the conditions for receiving credit from private i struction are given.

Lower division basic requirements for all music majors: Music 8A-8B, 10A B-C-D (may be omitted in part or in full upon evidence of satisfactory piano tec nique), 51A-51B, 58A-58B, four music activities selected from music courses numbere 70 to 87 (see activity requirement above). Upper division basic requirements for a music majors: Music 101A-101B, 108A-108B, 109A, 146A-B-C, four music activiti selected from music courses numbered 170 to 187 (see activity requirement above

One of the following areas may be elected by the students for major emphasis

*Performance:* Add the following courses to the basic requirements: Lower d vision: Four units selected from Music 11, 16, 21, 26, 31, or 50. Upper division: Fo units selected from Music 111, 112, 116, 117, 121, 122, 127, 131, 132, or 150ABCD four units of electives chosen from Music 109B and/or 199 (special studies in mus history and literature or composition). The student emphasizing performance mu appear in a joint public recital during the junior year and must present an enti solo public recital during the senior year; such students must pass a prelimina audition of the compositions to be performed at the public recital before the mus faculty during the semester preceding the recital appearance.

*Music History and Literature:* Add the following courses to the list of requir ments: Upper Division: Four units selected from Music 111, 112, 116, 117, 121, 12 126, 127, 131, 132 or 150ABCD; six units selected from Music 109B and 199 (speci studies in history and literature or composition). During his senior year the stude emphasizing history and literature is required to organize, prepare program notes a present two recitals consisting of recorded or "live" performances each of which wi deal with representative works of a certain period or composer or with certain period composers, works or styles to be compared; such students must pass a prelimina audition of the material to be presented before the music faculty at least one mon in advance of each performance.

*Creative Activity:* Add the following courses to the list of requirements: Upp division: Four units selected from Music 111, 112, 116, 117, 121, 122, 126, 127, 13 132, or 150ABCD; six units selected from Music 109B and 199 (special studi in history and literature or composition). The student emphasizing creative activi is required to present a concert of his compositions during the senior year; such st dents must present the scores of works to be performed to the music faculty o month in advance of the performance.

Students are required to consult with the chairman of the department f selection of the field of emphasis.

A *teaching major in music* is offered for the special secondary credential a for the general secondary credential. For statement of requirements, refer to the credentials.

### Minor

A *minor in arts and sciences* is offered in *music.* General basic requirements f the minor are as follows: Demonstration of vocal or instrumental performing abili before admission to the minor program may be granted; as laboratory experien participation in one music activity each semester (in special cases this requireme may be waived by the chairman of the department) ; a maximum of four units r ceived from music activities may be used toward the total graduation requireme Lower division: 14 to 18 units: Music 8A-8B, 10A-B-C-D (may be omitted in pa or in full on evidence of satisfactory piano technique) ; six units selected from 51 51B or 58A-58B; two units from courses numbered 70 to 87 (see activity requir ments for the minor). Upper division: Six units selected from Music 101A-101B 108A-108B; two units of music activities from music courses numbered 170 to 1 (see activity requirements for the minor).

## ELECTIVES IN MUSIC

The Music Department offers certain courses which fulfill the needs of studen who do not have music as a major or minor subject but who are interested in mus as an elective study area for the enrichment of their cultural background. Cours rticularly suited to these needs are Aesthetics 2 and 102 and the music courses mbered 70 to 88 and from 170 to 188; such courses are designated as general eduion courses and may be taken as partial fulfillment of the Literature, Philosophy, d the Arts requirement in general education.

Some students will be musically prepared to elect courses in music which may may not be included in the general education group. Enrollment by qualified stuits who wish to elect these courses is encouraged.

### Lower Division Courses

**)7A. Musicianship—For General Elementary Teachers** (3) I, II
Elementary music theory and skills including notation, meter, rhythm, scales, ervals, triads, sight singing, ear training, dictation, elementary keyboard facility l other rudiments. State adopted elementary music texts used. A general elementary dential requirement. Closed to music majors or minors. Formerly Music 1A.

**. Music Materials for the Elementary School** (3) I, II
Study of all phases of elementary school music: Singing, listening, reading, ative music, instruments, repertoire of songs and records, music projects. Required all general elementary credential candidates. Prerequisite: Music 7A or consent instructor.

**. Music Fundamentals** (3) I
Preparation for study of music structure. Designed to equip the student to g, play at the keyboard, write and recognize aurally scales, intervals, triads and ic rhythms. (Note: Students lacking keyboard facility must enroll concurrently piano study.) For majors and minors.

**Elementary Harmony** (3) I, II
Diatonic usage studied through written exercises, keyboard harmony, analysis, tation and sight-singing. Prerequisites: Ability to play Bach chorales at the keyrd; Music 8A or equivalent.

**)10A-10B. Piano—Elementary Class Instruction** (1-1) I, II
Fundamental playing and reading techniques for the pianoforte. Emphasis upon ying by ear, and the development of interpretative ability. Music majors or minors required to start these courses on admission unless competence of 10D level is demtrated. Formerly Music 28ABCD.

**C-10D. Piano—Elementary Class Instruction** (1-1) I, II
Continuation of Music 10A-10B.

**BCD. Piano—Intermediate Class Instruction** (1-1-1-1) I, II
Materials and techniques of intermediate level are studied in detail. Satisfactory lition before the instructor is required for admission.

**. Voice—Elementary Class Instruction** (1) I, II
A class for beginners in the vocal field taking up the problems of breath control, e placement, articulation and enunciation. Frequent classroom performance of ple songs. Formerly Music 29AB.

**. Class Voice—Continuation First Semester Voice** (1) I, II
Study of more advanced songs with attention being given to interpretation, as l as continued work on tone, articulation and placement. Frequent performance ore class required. Prerequisite: Music 15A or equivalent. Formerly Music 29CD.

**BCD. Voice—Intermediate Class Instruction** (1-1-1-1) I, II
(Not offered 1951-52)
Materials and techniques of intermediate level are studied in detail. Satisfactory lition before the instructor is required for admission.

**B. Strings—Elementary Class Instruction** (1-1) I, II
Open to all students but primarily for those whose major instrument is not one he stringed instruments and who are preparing for a teaching credential in music. merly Music 2A.

**21ABCD. Strings—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfacto audition before the instructor is required for admission. Sections are offered in violi viola, cello, bass.

**25AB. Woodwinds—Elementary Class Instruction** (1-1) I, II

Open to all students but primarily for those whose major instrument is not o of the woodwind instruments and who are preparing for a teaching credential in musi Formerly Music 3A.

**26ABCD. Woodwinds—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfacto audition before the instructor is required for admission. Sections are offered in flut oboe, clarinet, and bassoon.

**30AB. Brass—Elementary Class Instruction** (1-1) I, II

Open to all students but primarily for those whose major instrument is not o of the brass instruments and who are preparing for a teaching credential in musi Formerly Music 6A.

**31ABCD. Brass—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfa tory audition before the instructor is required for admission. Sections are offered i horn, trumpet, trombone, tuba, and baritone.

**35. Percussion—Elementary Class Instruction** (1) I, II

Open to all students but primarily for those who are preparing for a teachi credential in music. Formerly Music 5AB.

**50ABCD. Intermediate Individual Study** (1-1-1-1) I, II

For the teaching credential performance requirement or for the requiremen of the major emphasis curricula leading to the A.B. degree with a major in musi See explanation below for conditions under which credit may be given for mus study under private instructors.

Piano
Organ
Voice
Flute
Oboe
Clarinet
Saxophone
Bassoon
French Horn
Trumpet
Trombone
Baritone Horn
Tuba
Percussion
Violin
Viola
Cello
Contrabass

**51A-51B. Survey of Music** (2-2) Year, 1

Elements and structure of music, instrumental and vocal timbre. Folk music various countries and music of representative composers. Lectures, study of scor and recordings. Outside concert attendance required. Designed for nonmusic majo and minors.

**53. Opera Technique** (2) I, II

Training in the interpretation and characterization of light and grand oper Specific work in coordination of operatic ensemble. Formerly Music 31.

**58A. Intermediate Harmony and Two-part Counterpoint** (3) II

Continuation of Music 8B including simple harmonic alteration. Strict speci counterpoint in two parts. Prerequisite: Music 8B.

**58B. Advanced Harmony and Three-part Counterpoint** (3)
(Not offered 1951-52)

Chromatic alteration with emphasis on analysis of 19th century chromatic usa and construction of examples in corresponding idioms. Strict species counterpoint i three parts. Prerequisite: Music 58A.

## ACTIVITY COURSES

The activity courses are designed to afford opportunity for observation of r hearsal techniques and laboratory experience in the study and performance of a wi range of representative literature of various periods.

**)70A-70B. Chamber Music** (1-1) I, II
Sections for string, woodwind, brass, piano, and mixed ensemble groups. Per-
ssion of the instructor required. Formerly Music 30AB.

**-70D. Chamber Music** (1-1) I, II
Continuation of Music 70A-70B.

**A. Beginning Instrumental Ensemble** (½) I, II (Not offered 1951-52)
Open to all instrumental students. Group performance of simple orchestral and
d scores. Prerequisite: Music 20A, 25A, 30A, or equivalents, one or more. For-
rly Music 24A.

**3. Intermediate Instrumental Ensemble** (½) I, II (Not offered 1951-52)
Group performance of orchestral and band scores of more advanced grade.
terials covered will prepare the student for minor parts in either the symphony
hestra or the symphony band. Prerequisites: Music 72A or equivalent. Formerly
sic 24B.

**)75ABCD. Symphony and Marching Band** (2-2-2-2) I, II
Permission of the instructor required. Formerly Music 26ABCD.

**)80ABCD. Symphony Orchestra** (1-1-1-1) I, II
Permission of the instructor required. Formerly Music 13ABCD.

**)85ABCD. Chorus** (1-1-1-1) I, II
Permission of the instructor required. Formerly Music 15ABCD.

**)86ABCD. Treble Clef** (1-1-1-1) I, II
Permission of the instructor required. Formerly Music 10ABCD.

**)87ABCD. Men's Glee Club** (1-1-1-1) I, II
Permission of the instructor required. Formerly Music 12ABCD.

**)88ABCD. Workshop Chorus** (½-½-½-½) I, II
Open to students who do not have music as a major or minor field and who are
erested in singing standard choral works. No entrance examination required. De-
ned for nonmusic majors and minors. Formerly Music 20ABCD.

### Upper Division Courses

(For description of courses in the field of music appreciation, see Aesthetics)

**A-101B. History of Music** (3-3) Year, 1
Detailed study of chronological development of musical art and forms from the
of Bach to the present. Analytical score study and assigned recordings. Familiarity
h musicological resources through individual assignments. Prerequisite: Music
-51B. Music majors and minors only.

**A-105B. Advanced Harmony and Composition** (3-3) Year, 1
Study of the possible types of modulation and chromatic harmonies: Continua-
n of harmonic analysis and original composition. Prerequisite: Music 4A-4B. 105A
prerequisite for 105B. To be discontinued after 1951-52.

**A. Counterpoint** (2) I
Study of the five species of counterpoint with much practice in writing in such
ms. Application of contrapuntal style to modern composition. Prerequisite: Music
To be discontinued after 1952-53.

**B. Counterpoint** (2) II
Species counterpoint in four parts. Analysis of contrapuntal usage in musical
position. Continuation of Music 106A. Prerequisite: Music 106A. To be discon-
ued after 1952-53.

**A. Twentieth Century Harmonic Practice and Four-part Counterpoint**
(3) (Not offered 1951-52)
Study of harmonic usages and trends since Debussy. Strict species counterpoint
four parts. Prerequisite: Music 58B.

**B. Strict Composition** (3) (Not offered 1951-52)
Problems of composition in the shorter forms. Prerequisite: Music 108A.

**109A-109B. Instrumentation and Arranging** (2-2) Year, 1

Arranging of music for full orchestra. Selected works of students to be pe formed by standard orchestras. Prerequisites: Music 58B or 4B; 109A for 109 Formerly Music 121A-121B.

**111ABCD. Piano—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studies in detail. Satisfa tory audition before the instructor is required for admission.

**112ABCD. Piano—Advanced Class Instruction** (1-1-1-1) I, II

Materials and techniques of the advanced level are studied in detail. Satisfa tory audition before the instructor required for admission.

**116ABCD. Voice—Intermediate Class Instruction**
(1-1-1-1) I, II (Not offered 1951-52)

Materials and techniques of intermediate level are studied in detail. Satisfacto audition before the instructor is required for admission.

**117ABCD. Voice—Advanced Voice Instruction** (1-1-1-1) I, II

Materials and techniques of advanced level are studied in detail. Satisfacto audition before the instructor is required for admission.

**121ABCD. Strings—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfa tory audition before the instructor is required for admission. Sections are offer in violin, viola, cello, and bass.

**122ABCD. Strings—Advanced Class Instruction** (1-1-1-1) I, II

Repertoire includes study of standard orchestral parts, solos, sonatas, suites an concerti. Satisfactory auditions before the instructor are required for admission. Se tions are offered in violin, viola, cello, and bass.

**126ABCD. Woodwinds—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfa tory audition before the instructor is required for admission. Sections are offered flute, oboe, clarinet, and bassoon.

**127ABCD. Woodwinds—Advanced Class Instruction** (1-1-1-1) I, II

Repertoire includes study of standard orchestral parts, solos, sonatas, suites an concerti. Satisfactory auditions before the instructor are required for admission. Se tions are offered in flute, oboe, clarinet, and bassoon.

**131ABCD. Brass—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfa tory audition before the instructor is required for admission. Sections are offered horn, trumpet, trombone, tuba, and baritone.

**132ABCD. Brass—Advanced Class Instruction** (1-1-1-1) I, II

Repertoire includes study of standard orchestral parts, solos, sonatas, suites an concerti. Satisfactory auditions before the instructor are required for admission. Se tions are offered in horn, trumpet, trombone, tuba, and baritone.

**141. Methods in Teaching Piano** (3) Summer

Teaching of beginning and intermediate piano. Survey of materials availab for child and adult classes. Special consideration of the problems of the adult beginne Supervised teaching of beginning students in individual lessons and class groups. Fo merly Music 128.

**142. Survey of Harmony and Musical Form** (2) (Irregular)

A review of diatonic and chromatic harmony, modulation and musical form. Th material covered will serve as refresher study for the Colleague Examination und the California Plan of the Music Teachers Association of California. Not open music majors or minors. Formerly Music 101.

**146A. Fundamentals of Conducting** (1) I

Elements of baton technique and development of basic skills common to chor and instrumental conducting.

**6B. Instrumental Conducting** (1) II

Study of orchestra and band scores of graduated levels of advancement. The ss will prepare and conduct instrumental works in public performances. Prereqsite: Mus. 146. (Formerly Ed. 145B.)

**6C. Choral Conducting** (1) I

Representative literature and techniques for choral organizations will be studied d performed. Practical experience in typical conducting situations will be emphaed in various grade levels. Prerequisite: Mus. 146A. (Formerly Music 120A.)

**0ABCD. Advanced Individual Study** (1-1-1-1) I, II

For the teaching credential performance requirement or for the requirements the major emphasis curricula leading to the A.B. degree with a major in music. e explanation below for conditions under which credit may be given for music study der private instructors.

Piano
Organ
Voice
Flute
Oboe
Clarinet
Saxophone
Bassoon
French horn
Trumpet
Trombone
Baritone horn
Tuba
Percussion
Violin
Viola
Cello
Contrabass

**3. Opera Technique** (2) I, II

Training in interpretation and characterization of light and grand opera. Speic work in coordination of opera ensemble. Formerly Music 131.

**6. Honors Course** I, II (Credit to be arranged)

To be arranged after consultation with the chairman of the department. Refer the Honors Program.

**9. Special Studies** (1-3) I, II

Special studies in music. Prerequisite: Consent of the chairman of the departnt. Maximum, six units.

## ACTIVITY COURSES

The activity courses are designed to afford opportunity for observation of rearsal techniques and laboratory experience in the study and performance of a wide nge of representative literature of various periods.

**)170A-170B. Chamber Music** (1-1) I, II

Sections for string, woodwind, brass and piano ensemble groups. Permission of e instructor required. Formerly Music 130ABCD.

**0C-170D. Chamber Music** (1-1) I, II

Continuation of Music 170A-170B.

**2. Beginning Instrumental Ensemble** (½) I, II (Not offered 1951-52)

Open to all instrumental students. Group performance of simple orchestral parts d band scores. Prerequisites: Music 20A, 25A, 30A, or equivalents, one or more. rmerly Music 124A.

**2B. Intermediate Instrumental Ensemble** (½) I, II (Not offered 1951-52)

Group performance of orchestral and band scores of more advanced grade. Matels covered will prepare the student for minor parts in either the symphony orchestra the symphony band. Prerequisites: Music 72A or equivalent. Formerly Music 124B.

**)175ABCD. Symphony and Marching Band** (2-2-2-2) I, II

Permission of the instructor required. Formerly Music 126ABCD.

**)180ABCD. Symphony Orchestra** (1-1-1-1) I, II

Permission of the instructor required. Formerly Music 113ABCD.

**)185ABCD. Chorus** (1-1-1-1) I, II

Permission of the instructor required. Formerly Music 115ABCD.

**)186ABCD. Treble Clef** (1-1-1-1) I, II

Permission of the instructor required.

**(G)187ABCD. Men's Glee Club** (1-1-1-1)
Permission of the instructor required. Formerly Music 112ABCD.

**(G)188ABCD. Workshop Chorus** (½-½-½-½) I, II
Open to students who do not have music as a major or minor field and who are interested in singing standard choral works. No entrance examination required. Closed to music majors and minors. Formerly Music 120ABCD.

### Graduate Courses

**200A-200B. Special Problems in Music** (2-2) Year, I
A graduate course in which students may carry out projects in various fields of music under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply for work within a certain field after conference with the music faculty.

**203. Musicology** (2) I
Survey of bibliography and methods of research in music history and literature Emphasis upon interrelationship of musical developments and trends in other arts Completion of an acceptable thesis in fields of investigation chosen by the student Prerequisites: Music 101A-101B and permission of the instructor. Advanced courses in Harmony, Composition, and Form and Analysis are desirable.

**206. Composition** (2) II
Music composition in the larger forms. Students will be required to submit complete work in one of the larger musical forms as thesis in the course. Prerequisites Music 105A-105B, 106A, 107A, 121A and permission of the instructor.

## CONDITIONS UNDER WHICH CREDIT MAY BE GIVEN FOR MUSIC STUDY UNDER PRIVATE INSTRUCTORS

Credit may be allowed for private instruction in music under the followin conditions:

1. The applicant for such credit must be a regularly enrolled student in the musi department of the college.
2. The instructor giving such private work must be approved by the musi department. All private work and the names of all such teachers must b registered in the office of the music department chairman at the beginnin of the semester.
3. In the case of first semester private study, a placement examination conducte by the music department faculty at the beginning of the semester will sho the status of the student at the beginning of his work.
4. Evidence that the standards of the music department have been met will b shown by an examination conducted by the music department faculty at th end of the semester.
5. Ten clock-hours of lessons, and 100 hours of practice per semester are require for one unit of credit.

# PHILOSOPHY

## IN THE DIVISION OF SOCIAL SCIENCES

*Major* work is not offered in philosophy.

### Minor

A *minor in arts and sciences* is offered in philosophy. The minor must include least 15 units of work in philosophy, nine units of which must be from courses carryin upper division credit.

A *teaching minor* is not offered in philosophy.

## Lower Division Courses

**(G)1A. Introduction to Philosophy** (3) I, II

The place of philosophy in intelligent living. The methods, values, and areas of philosophical inquiry. Through discussion procedures, each student is encouraged to think independently on issues in ethics and religion.

**(G)1B. Introduction to Philosophy** (3) I, II

The nature of philosophical inquiry as applied to problems of knowledge and reality. Through discussion procedures, the student has opportunity and is encouraged to formulate his own tentative conclusions.

**(G)3A-3B. History of Philosophy** (3-3) Year, I

The development of the major concepts of philosophers in the western tradition. Relations of philosophy to science, art, religion, and social and political conditions. 3A covers the ancient and medieval period, 3B the modern. 3A is not prerequisite for 3B.

**20. Logic** (3) I

The use of logic in science and practical life. Analysis of fallacies. Logic and language. Formation and validation of hypotheses. Interpretations of probability. The logic of experimentation.

## Upper Division Courses

**(G)101. Contemporary Philosophy** (3) II

The major philosophical issues, movements, and figures in American and European philosophy of the twentieth century. Prerequisite: 3 units selected from Philosophy 1A, 1B, 3A, or 3B.

**110. The Philosophy of John Dewey** (2) I

(Offered in 1951-52 and alternate years)

The background, development, and influence of John Dewey's thought. His philosophy of education as related to his logical, epistemological, metaphysical, psychological, ethical, and esthetic theories.

**111A-111B. Theory of the State** (3-3) Year, I

The nature of the state, its organization and activities, and its relation to the individual and to other states. Special attention is given to recent developments in the field of political thought. Not open to students with credit for Political Science 111A-111B.

**121. Deductive Logic** (3) II (Offered in 1952-53 and alternate years)

Definition, classification, and division. The forms of reasoning. Analysis of propositions. Immediate inference. The syllogism. Dilemmas. Modern symbolic logic.

**(G)129. Social Ethics** (3) I

Ethical issues of contemporary life. Individualism vs. collectivism; democracy vs. dictatorship; ethical problems arising in law, medicine, business, government, and interpersonal relationships.

**130. Theory of Ethics** (3) II

A study of significant and typical value theories and systems and of the concrete problems such theories seek to explain. The emphasis will be placed on moral values. The student will be encouraged to examine critically his own system of values.

**136. Philosophy of Art** (3) II

The nature of esthetic experience. The principal theories of art, both traditional and contemporary, are studied at length, both in relation to actual artistic production and to the role of art in society.

**137. Philosophy of Science** (3) I (Offered in 1952-53 and alternate years)

A critical examination of the basic concepts and methods underlying contemporary scientific thought. Contributions of the special sciences to a view of the universe as a whole. Prerequisite: 3 lower division units in philosophy.

# PHYSICAL EDUCATION

## IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

A *major in arts and sciences* is offered in *physical education* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. A minor in a field other than physical education is required.

*Major for Men:* Lower division requirements: Two units of physical education activity courses in general education; Physical Education 53, 63, 64, 74; Zoology 8. Upper division requirements: 26 upper division units to include seven units from physical education courses numbered 141 to 148, inclusive; Physical Education 155, 168, 170A-170B, 177; and eight units selected from courses in health, physical education, or recreation.

*Major for Women:* Lower division requirements: Four units of physical education activity courses to include Physical Education 1A, 2A-2B, 3A-3B, 4, 5, and 6 (two of these units may be counted as general education); Physical Education 53, 72, and Zoology 8. Upper division requirements: 26 upper division units to include Physical Education 155, 156A-156B, 160, 161, 168, 170A-170B, 177; and seven units selected from courses in health, physical education, or recreation.

A *teaching major* is offered in *physical education* for the general secondary and special secondary school credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *physical education*. The minor consists of a minimum of 15 units of work in physical education, nine units of which must be in courses carrying upper division credit. The plan for this minor must be approved by the chairman of the department.

A *teaching minor* is offered in *physical education* for the general secondary, and the special secondary credentials. It may be offered only as a second teaching minor for the general elementary and the kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Required Activities

All lower division students must elect one or more activity course each semester Two units of activity credit must be offered for graduation, but no more than one activity course in any one semester may be counted toward this requirement. Students carrying fewer than 12 units during any semester may obtain permission from the Dean of Instruction to postpone taking physical education, but not be exempted therefrom. No permanent excuses from required activity courses will be granted The college physician, in conjunction with the chairman of the department, wil consider stringent cases on an individual basis and recommend.

A medical examination is given each student when entering college and recommendation is made as to type of activity most beneficial. Individually adapted physica education classes to care for special needs are offered. The content of the required courses is planned to give each student an opportunity to participate in many activities of carry-over value, developmental nature, and recreational interest. An opportunity is afforded for students to participate in competitive sports and intramural programs

## MEN'S DEPARTMENT

Freshmen are required to choose from courses numbered 1-10. Sophomores and upper division students may choose from all courses offered. An activity course may be taken for credit once only.

### Lower Division Courses

### ACTIVITY COURSES

All activity courses are general education courses.

**1A-1B-1C-1D. Individual Adaptation** (½) I, II
**2. Basketball** (½) I, II
**3. Boxing** (½) I, II
**4. Gymnastics** (½) I, II
**5. Soccer** (½) I
**6. Softball** (½) II
**7. Touch Football** (½) I
**8. Track and Field** (½) I, II
**9. Volleyball** (½) I, II
**10. Wrestling** (½) I, II
**13. Archery** (½) I, II
**14. Badminton** (½) I, II
**15. Fencing** (½) I, II
**16. Golf** (½) I, II
**17. Handball** (½) I, II
**18. Tennis** (½) I, II
**19. Bowling** (½) I, II
**20. Swimming** (½) I, II
**23. Sailing** (½) I, II
**24. Hiking** (½) I, II

### INTERCOLLEGIATE SPORTS

**30. Baseball** (½) II
**31. Basketball** (½) I
**32. Cross Country** (½) I
**33. Football** (½) I
**34. Golf** (½) II
**35. Gymnastics** (½) II
**36. Tennis** (½) II
**37. Track** (½) II
**38. Wrestling** (½) II

## WOMEN'S DEPARTMENT

Freshmen are required to choose from courses numbered 1-11. Sophomores may choose from all courses offered. An activity course may be taken for credit once only.

The individual activities, tennis, golf, archery, badminton, swimming, and dancing are offered through the year. Candidates for the special secondary credential in physical education must select one as a major activity and two others as minors. Skills in the activities must be maintained as prerequisite to the senior course, Physical Education 185.

### Lower Division

### ACTIVITY COURSES

All activity courses are general education courses.

**1A-1B. Fundamental Skills** (½) I, II
Practice in efficient fundamental body movements.

**2A-2B. Folk Dancing** (Men and Women) (½) I, II
2A is a prerequisite for 2B.

**3A-3B. Modern Dance** (Men and Women) (½) I, II
Practice in dance techniques and rhythms. 3A is a prerequisite for 3B.

### TEAM SPORTS

All courses in team sports are general education courses with the exception of Physical Education 22.

**4. Fieldball, Soccer, Speedball** (½) I, II

**5. Softball, Volleyball, Hockey** (½) I, II

**6. Basketball** (½) I, II

**11A-11B. Ballroom Dancing** (Men and Women) (½) I, II
11A is a prerequisite for 11B.

**12A-12B. Advanced Modern Dance** (Men and Women) (1-1) Year, I

Laboratory experiments in advanced choregraphy and percussion accompaniment. Prerequisites: 3A and 3B.

**13A-13B. Archery** (½) Year, I, II

**14A-14B. Badminton** (½) Year, I, II

**16A-16B. Golf** (½) I, II

**18A-18B-18C. Tennis** (Beginning, Intermediate, Advanced) (½-½-½) I, II

18A is a prerequisite for 18B; 18B is a prerequisite for 18C.

**19A-19B. Bowling** (½) I, II

**20A. Swimming** (For non-swimmers only) (½) I, II

**20B. Swimming** (Intermediate) (½) I, II

**21. Life Saving** (1) I, II

Learning of safety in and on the water and the ability to assist or rescue a person in danger of drowning. Course content qualifies for the American Red Cross Life Saving Certificate.

**22. Water Safety Instruction** (1) II

Methods and materials for teaching swimming. Course qualifies for American Red Cross Swimming Instructors Certificate. Prerequisite: P.E. 20B, or equivalent and American Red Cross Senior Life Saving Certificate.

**23. Sailing** (½) I, II

**24. Hiking** (½) I, II

## MEN AND WOMEN

## PROFESSIONAL THEORY COURSES

### Lower Division Courses

**53. Physical Education in the Elementary School** (2½) I, II

The State program in physical education for the elementary school forms the basis of the course. Candidates for the Elementary Credential are required to take the course section which includes two lectures and two laboratory periods per week Candidates for the Special Secondary Credential in physical education may take the course section which includes two lectures without laboratory periods.

**63. Professional Activities** (Men) (2) I

Presents an opportunity for majors to develop the skills and techniques of the dance. Organization and presentation of materials are emphasized. (Formerly Physica Education 43.)

**64. Professional Activities** (Men) (2) II

Emphasis is placed on acquiring the skills, teaching techniques, and developmen of knowledge and interest in tumbling, apparatus, stunts, free exercise and self-testing activities. (Formerly Physical Education 44.)

**72. Introduction to Physical Education** (2) I, II

History and principles of physical education and sports movements of the world Objectives of the modern school program are studied and an effort is made to give to the student a basic philosophy and background for professional education.

### Upper Division Courses

**141. Professional Activities: Gymnastics** (Men) (2) I

The skills and teaching techniques in gymnastics. The place of tumbling, apparatus, self-testing and calisthenics in the school program. Knowledge of the rule for competition in gymnastics.

**142. Professional Activities: Swimming** (Men) (1) II

The development of skills in swimming with emphasis on the teaching techniques Scope of course is from beginning swimming to life saving techniques.

**145. Professional Activities: Team Sports** (Men) (2) I
The skills, rules, teaching techniques, officiating, and organization of materials in such sports as soccer, touch football, softball, hockey, basketball, and others are emphasized.

**146. Professional Activities: Individual Sports** (Men) (2) II
The skills, rules, teaching techniques, officiating, and organization of materials in such sports as handball, tennis, badminton, archery, golf, and others are emphasized.

**147. Professional Activities: Coaching Baseball and Track** (Men) (1-2) II
Organization of practice sessions, drills for developing fundamental skills and special abilities. Problems of scheduling, handling teams and game strategy are taken up. Rules, sessions, and officiating techniques are given attention.

**148. Professional Activities: Coaching Football and Basketball** (Men) (1-2) I
Organization of practice sessions, drills for developing fundamental skills and special abilities. Problems of scheduling, handling teams, and game strategy are taken up. Rules, sessions, and officiating techniques are given attention.

**151. Instructor's Course in First Aid** (2) I, II
Instructor's course in first aid, as outlined by The American Red Cross. Standard first aid techniques, care of injured, certification and record keeping, and practical work in first aid.

**155. Applied Anatomy and Kinesiology** (3) I
Anatomical and kinesiological analysis of human structure and movement. Application of analysis relative to mechanical principles as influenced by efficiency factors of body functions. Prerequisite: Zoology 8.

**156A-156B. Sports Methods** (Women) (2-2) Year, I
Analysis of skills in basketball, hockey, soccer, speedball, volleyball, and softball; methods of presenting sports to large groups; study of rules and officiating. Prerequisites: Physical Education 4, 5, and 6.

**160. Teaching of Body Mechanics** (Women) (2) I
Efficient use of the body in daily living; evaluation and classification of exercises, methods, and practice in planning and presenting material.

**161. Folk Dancing Materials and Advanced Techniques** (Women) (2) I
Folk customs, festivals, and costumes. Selection of dance materials for various age groups. Practice in advanced techniques. Prerequisite: Physical Education 2A.

**162. History and Philosophy of the Dance** (2) I
Historical background and appreciation of dance, with special emphasis upon development of art in America. The justification for dance as an educational and creative art medium and its place in the curriculum. Not open to students with credit for Aesthetics 162. A general education course in Literature, Philosophy, and the Arts.

**164A-164B. Methods in Modern Dance** (2-2) Year, I
Methods in the teaching of modern dance techniques and choreography. Selection of materials and course planning for the secondary school. Prerequisite: Physical Education 12A-12B, or satisfactory examination in dance skills.

**168. Physiology of Exercise** (3) II
A nonlaboratory course emphasizing the relation of physiology to muscular exercise in physical activities. Prerequisites: Physiology 1A and Zoology 8 or equivalent.

**170A-170B. Recreational Leadership** (2-2) Year, I
Principles and practices in recreational leadership. Methods of instruction and special techniques in the activities of the recreation program. Attention to crafts, music, social programs, drama, special projects, dance, sports, campcraft, and outdoor education. Not open to students with credit for Recreation 170A-170B.

**177. Individual Program Adaptation** (3) II
The adaptation of programs for the typical individual, including physical exam nations, training and prescribed exercises, follow-up, instructional problems, ar evaluation.

**185. Techniques of Individual Sports** (Women) (1) I
Rules and teaching methods and testing individual playing techniques ar knowledge in tennis, archery, badminton, and swimming. Prerequisite: Senior standin

**190. Administration of Physical Education in the Secondary School** (3) I,
Problems and practices in the organization and administration of the seconda school activity program. Study, selection and adaptation of activities, examination, ar grouping of pupils, use and evaluation of tests. Selection and maintenance of equipme and facilities.

**199. Special Study in Physical Education** (1-3) I, II
An opportunity is presented for extensive review of pertinent literature, ind vidual research and advanced study of problems in the profession. Prerequisit Approval of the chairman of the division. Maximum credit, six units.

### Graduate Courses

**200. Evaluation Procedures in Health, Physical Education and Recreation** (2
A study of tests and measurements in the profession with practice in their us construction and interpretation of results.

**201. Developmental Physical Education** (2)
Intensive study of postural divergencies, lack of physical development, ar methods of correcting such conditions through exercise are studied. Practice in maki physical examinations, constructing individual exercise programs, teaching remedi exercises, as well as ethical procedures and limitations are considered. Prerequisit Applied Anatomy and Kinesiology.

**203. Problems in Physical Education** (2)
A survey of current problems facing the Physical Education profession is studi through a review of the literature, discussion of trends, observation of school situ tions together with the analysis and evaluation of actual problems. Written reports a required.

**204. Problems in Recreation** (2)
A survey of current problems facing the recreation profession is studied throug a review of the literature, discussion of trends, observation of school situations togeth with the analysis and evaluation of actual problems. Written reports are require Not open to students with credit for Recreation 204.

**298. Special Study** (1-3)
An individual study course designed primarily for candidates for the master degree.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

## PHYSICAL SCIENCE

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *physical science major in arts and sciences* may be used for the A.B. degree b students who have been admitted to the teacher education program if eight units i professional education courses are completed by the date of degree candidacy. Low division requirements: Chemistry 1A-1B, Physics 4A-4B-4C (or 2A-2B-3A-3B Mathematics 3A-3B, 4A (recommended 4B). Upper division requirements: 24 uni to include a minimum of seven units in each of chemistry and physics. Chemistry mu include Chemistry 101. Physics must include Physics 107 and 158 (or 148 if physi preparation is 2A-2B). Recommended: Physical Science 110. Other courses to b selected with approval of the departmental adviser.

A *teaching major in physical science and general science* is offered for the general secondary and general junior high school credentials. For a statement of requirements, refer to these credentials.

### Minor

A *teaching minor in physical science and general science* is offered for the general secondary, special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Lower Division Courses

**(G)1. Introduction to Physical Science** (3) I, II
A general course presenting the nature of man's physical universe with materials chosen from astronomy and physics. Not open to students who have had a college course in physics or astronomy, or Physical Science 40.

**(G)2. Introduction to Physical Science** (3) I, II
Emphasis will be upon materials chosen from geology and chemistry to show the origins of natural materials and their use. Not open to students who have had a college course in chemistry or geology.

**(G)10. Introduction to Photography** (3) I, II
A consideration of photographic optics and chemistry; nature of light and image formation; photographic emulsions, exposure and development. Composition and lighting. Two lectures and one three-hour laboratory per week. Will not satisfy laboratory requirements in physical science but may be counted toward general education under practical arts.

### Upper Division Courses

**110. Photography for Teachers** (3)
Designed for more mature students to learn photographic skills useful in teaching.

**130. Advanced Photography** (3) I
A consideration of advanced negative control, projection printing techniques, composition and editorial content, architectural and illustrative photography, and flood photoflash techniques. Two lectures and three hours of laboratory per week. Prerequisite: Physical Science 10.

**(G)150. Readings in the Physical Sciences** (2)
Reading from selected materials with informal class discussion of topics.

# PHYSICS

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in *physics* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Physics 4A-4B-4C, Chemistry 1A-1B, or their equivalents. Recommended: a reading knowledge of French or German. Upper division requirements: 24 upper division units in physics to include Physics 105A-105B, 107, 110, 158; three units chosen from Physics 102, 160, of 170; two units chosen from Physics 120, 122, or 124; and two units of Physics 199. A minor in mathematics is required, consisting of Mathematics 3A-3B, 4A-4B, or their equivalents, and Mathematics 118A-118B. Recommended: Three units chosen from Mathematics 104, 111, 119, 121, or 124. Nine units of chemistry, physics, and mathematics may be counted toward general education requirements.

A *major in arts and sciences* is offered in *physics* for the B.S. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Physics 4A-4B-4C, Chemistry 1A-1B, Mathematics 3A-3B, and 4A-4B, or their equivalents. Upper division requirements: A minimum of 36 upper division units including Physics 102, 105A-105B, 107, 110, 158; two units of upper division laboratory; two additional units of Physics 199; and Mathematics 118A-118B. The program, planned in consultation with the departmental adviser for this degree, must be designed to provide a four-year terminal program for the student. A minor is not required. Nine units of chemistry, physics, and mathematics may be counted tow general education requirements.

The following additional courses are required as a part of two options appro under this degree: *Applied Physics*: Physics 106, 112 and four units of Physics 1 Recommended: Physics 114, 160, 170 and Astronomy 107. *Electronics*: Physics 1 122, 124, 160 and either Physics 152 or Engineering 150. Recommended: Physics 1 170 and Astronomy 107.

A *teaching major in physical science and general science* is offered for the g eral secondary school credential and a *teaching major in general science* is offered the general junior high school credential. For statement of requirements, refer these credentials.

### Minor

A *minor in physics* is offered in arts and sciences. The minor must include least 15 units, or maximum of 22, six units of which must be in courses carrying up division credit.

A *teaching minor in physical science and general science* is offered for the g eral secondary, special secondary, general elementary, and kindergarten-prim credentials. For statement of requirements, refer to these credentials.

### Lower Division Courses

NOTE: A maximum of 12 units of lower division physics credit may be app toward the A.B. or B.S. degrees.

**(G)2A-2B. General Physics** (3-3) Year, I

This course is for liberal arts and certain pre-professional students who do desire intensive physics preparation. Lectures, demonstrations and discussions. Properties of Matter, Mechanics and Heat. 2B, Electricity, Magnetism, Sound Light. Prerequisite: Two years of high school mathematics.

**(G)3A-3B. Physical Measurements** (1-1) Year, I

A laboratory course to accompany Physics 2A-2B. 3A: Properties of Ma Mechanics and Heat. 3B: Electricity, Magnetism, Sound and Light. One three- laboratory per week. Prerequisite for 3A: Concurrent or previous registratio Physics 2A. Prerequisite for 3B: Concurrent or previous registration in Physics

**4A-4B-4C. Principles of Physics**

The following sequence of three courses is designed to give a thorough b ground in the fundamental principles of physics, with applications to practical p lems. Each course three lectures and one three-hour laboratory per week.

**4A. Mechanics** (4) I, II

The mechanics of solids and fluids. Prerequisites: Credit for Mathem 3A, or concurrent registration with permission of instructor. open to first semester freshmen.

**4B. Electricity** (4) I, II

Magnetism, electricity and elementary electronics. Prerequisite: Physic

**4C. Heat, Sound and Light** (4) I, II

Heat and elementary thermodynamics, sound and light. Prerequi Physics 4B.

**14. Acoustics of Music** (3) II

Fundamentals of acoustics and audition underlying musical phenomena prese in descriptive and nonmathematical terms. Prerequisite: A technical understan of music.

**22. General Radio** (2) I

Theory of vacuum tubes and their applications to communication, television, industry. This course may be taken for credit in addition to the maximum 12 uni lower division physics toward the A.B. or B.S. degree.

### Upper Division Courses

**102. Basic Electronics** (3) I

Principles of electron tubes and resistance loaded amplifiers. Negative feed and its application to regulated power supplies, cathode followers and direct co amplifiers. Prerequsite: Physics 4B.

**104. Communications (3) II**

Power amplifiers, oscillators, modulators and detectors. Radio transmitters and receivers for amplitude modulation and frequency modulation. Television systems. Antennas and radio wave propagation. Prerequisite: Physics 102 or permission of the instructor.

**105A-105B. Analytical Mechanics (3-3) Year, I**

Fundamental principles of Newtonian mechanics by elementary vector methods. 105A: Statics and kinematics of rigid bodies. 105B: Dynamical principles underlying linear and rotary motion of rigid bodies, with additional work in vibration and impact. Prerequisite: Physics 2A-2B or 4A and a working knowledge of calculus.

**106. Optics (3) II**

A study of reflection, refraction, dispersion, interference, diffraction, double refraction and polarization, with applications to optical instruments. Also wave propagation, radiation, spectra and the nature of light. Prerequisite: Physics 2B-3B or 4C.

**107. Electrical Measurements (2) I**

The theory and application of electrical measurements, including the measurements of current, voltage, power, resistance, capacitance and inductance. Stress on etermination of probable errors of measurements. An hour lecture and a three-hour laboratory per week. Prerequisite: Physics 2B-3B or 4B and a working knowledge of alculus.

**110. Alternating Current Circuits (3) I**

The operator j applied to circuits containing resistance, capacitance and inducance; series and parallel resonance; coupled circuits; transients; practical circuit lements, networks. Prerequisite: Physics 4B and Mathematics 4A.

**112. Heat and Thermodynamics (3) II**

A study of the thermal properties of matter with an introduction into the kinetic heory of gases and the laws of thermodynamics. Prerequisites: Eight units in physics nd a working knowledge of calculus.

**114. Acoustics (3) II**

A study of wave motion and its application to the production, transmission and eception of sound. Material in architectural acoustics, speech and hearing, and acoustial instruments is presented. Prerequisites: Physics 2B-3B or 4C.

**20. Advanced Laboratory (2) I, II**

Advanced experimental measurements in a branch of physics listed below. The ourse may be repeated for each subject. With the consent of the instructor and adviser, he course may be repeated in the same subject but with new material. Prerequisite: onsent of the instructor.

A. Acoustics
B. Atomic Physics
C. Electricity
D. Heat and Pyrometry
E. Mechanics
F. Optics

**22. Electronics Laboratory (2) I**

An experimental study of electron tubes and their associated circuits. Study of athode ray oscilloscope, vacuum tube voltmeter, characteristics of power supplies, mplifiers and filter systems. An hour lecture and a three-hour laboratory per week. rerequisite: Previous or concurrent registration in Physics 102, or permission of nstructor.

**24. Radio Measurements (2) II**

Laboratory measurements of the parameters of resonant circuits at radio freuencies. Study of the properties of oscillators, modulators, detectors and wave guides. n hour lecture and a three-hour laboratory per week. Prerequisite: Previous or conurrent registration in Physics 104.

**G)148. Introduction to Modern Physics (3) II**

A nonmathematical course covering recent developments in the field of physics, ncluding X-rays, radio-activity, cosmic rays, atomic and nuclear energy. Prerequisite: pper division standing. Not open to students who have credit for Physics 4A-4B-4C, r equivalent.

**152. Advanced Electronics** (2) I

Theory of vacuum tubes, ultra-high frequency systems and selected topics fro contemporary electronics. Prerequisite: Physics 104.

**158. Atomic Particles** (3) I

A study of experimental evidence for the existence and properties of the element atomic and nuclear particles. Introduction to the fields of atomic and nuclear physi Prerequisite: Physics 4A-4B-4C, or equivalent.

**160. Circuit Analysis** (3) II

A study of filter design, transmission lines, and network analysis. Prerequisit Physics 110.

**166. Honors Course** (Credit to be arranged) I, II

An individual study arrangement for students admitted to the Honors Progra Enrollment through the department chairman, subject to the approval by the Co mittee on Honors. Refer to the Honors Program.

**170. Electromagnetic Theory** (3) II

Electrostatics and magnetostatics treated by vector methods; chemical a thermal effects; motion of ions in electric and magnetic fields; magnetic field of current; electromagnetic induction and radiation. Prerequisites: Physics 110, and working knowledge of vector analysis and differential equations.

**199. Special Study** (1-2) I, II

Reading and laboratory work on a special problem in physics selected by t student. Each student will be assigned a member of the staff who will supervise l work. All candidates for the A.B. or B.S. Degree in physics are required to enr for 2 units of this course during the upper division work. Credit, hours and top to be arranged in each case.

### Graduate Courses

**200. Seminar** (2-2) I, II

An intensive study of some phase of advanced physics.

A. Mathematical Physics
B. Theoretical Mechanics
C. Kinetic Theory of Gases
D. Advanced Acoustics
E. Advanced Electronics and Electricity
F. Electromagnetic Radiation
G. Atomic Physics
H. History of Physics
I. Fluid Mechanics
J. Vibration

**290. Bibliography** (1)

Exercise in the use of basic reference books, journals, and specialized bibli raphies, preparatory to the writing of a Master's project or thesis.

**298. Special Study** (1-3)

An individual study course designed primarily for candidates for the maste degree.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis in physics for the maste degree.

## PHYSIOLOGY

### IN THE DIVISION OF LIFE SCIENCES

*Major* and *minor* work are not offered in physiology. Courses in this field may used as part of the major in zoology or life sciences, and are recommended as part the lower division requirements for the major in psychology, and for the physi education credential.

### Lower Division Courses

**1A. Human Physiology** (3) II

A lecture course considering the functions of the human body, and includin brief review of the microscopic and gross anatomy of the structures discussed. Prereq sites: Elementary chemistry and high school or college biology or zoology. Three ho of lecture per week. Credit reduced to 2 units, for students having credit for Zoology

**1C. Human Physiology** (2) II

A study of the human functions through laboratory experiments and demonstrations. Prerequisites: Physiology 1A completed or in progress. Six hours of laboratory per week.

### Upper Division Courses

**101. General Physiology** (4) II

Fundamentals of plant and animal functions. Two lectures and two laboratory periods per week. Prerequisites: Biology 3 and 4 or Zoology 1A-1B and Chemistry 1A-1B or Chemistry 2A-2B.

## POLITICAL SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *political science* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Political Science 1A-1B or 71A-71B. Upper division requirements: 24 units to include (a) Political Science 199 and (b) 21 upper division units in political science distributed among two of the following groups: *Group I: Theory and government*, courses numbered 100-139; *Group II: Administration*, courses numbered 140-149; *Group III: International affairs*, courses numbered 150-179. A minor is required and is to be chosen under the direction of the chairman of the department.

Students majoring in political science are advised to become as familiar as possible with related social science fields. Majors should have a reading knowledge of at least one foreign language. For students who expect to enter government service, two programs of study are offered: The Public Administration Curriculum and the Public Personnel Management Curriculum. For a description of these curricula, refer to the section of the bulletin entitled: Preprofessional and Vocational Curricula.

A *teaching major* is not offered in political science; however, courses in political science may be used as part of the *teaching major in social science* for the general secondary and general junior high school credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences in political science* is offered. The minor consists of a minimum of 15 units, or maximum of 22, nine units of which must be in courses carrying upper division credit.

A *minor in arts and sciences in public administration* is also offered. The minor consists of Political Science 71A-71B in the lower division; Political Science 140A-140B and three units from 198 or other political science course in the upper division.

A *teaching minor in social science* is offered for the special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Lower Division Courses

**(G)1A. Introduction to Government** (3) I, II

Theories and principles of government, with special attention to the problems created by modern industrialism and population pressures.

**G)1B. Introduction to Government** (3) I, II

A comparative survey of selected foreign governments: Their constitutional priniples, political institutions, and governmental problems.

**G)71A-71B. Introduction to American Government and Politics**

(3-3) Year, I, II

Semester I: Governmental organization in the United States; the federal system; he organization, powers and functions of the legislative, executive and judicial branches f the government; the relations between federal, state and local units of government.

Semester II: Expansion of governmental functions and the development of means f democratic control; an examination of the increased use of government as an instrument of social control; the history, motivation, methods and control of political parties; ominations, elections and minority groups; pressure politics.

## Upper Division Courses

**(G)101. American Institutions** (3) I
The principles of the Constitution of the United States of America, and a surve of the political and social institutions which have developed under the Constitution.

**(G)105. American Political Thought** (3) II
A survey of the development of American ideas concerning political authorit from the period of colonial foundation to the present time.

**(G)111A-111B. Theory of the State** (3-3) Year, I
The nature of the state, its organization and activities, and its relation to th individual and to other states. Special attention is given to recent developments in th field of political thought. Not open to students with credit in Philosophy 111A-111B.

**120. Political Parties** (3) I
A critical analysis of the political party as a part of the process of governmen party organization and activities; nominating and campaign methods; theories an functions of the party system; party responsibility. Special emphasis will be plac upon the function of the two-party system in American government.

**121. Basic Factors in American Politics** (3) I
An analysis of American political, legal, economic, and social factors in the relation to our political system and the public interest.

**122. Propaganda and Public Opinion** (3) II
A study of the forces which mold the American public mind, the practice propaganda, a description and analysis of public relations, pressure groups and the effect in American public life. Not open to students with credit for Journalism 132.

**128. Government Report Writing** (2) I
Actual writing problems in government, including surveys, recommendatio studies, analyses, progress reports, annual reports, etc., are discussed and their so tions analyzed. Attention to methods of collecting and organizing data, and pract in effective presentation of facts and ideas. Special consideration is given to proble of class members.

**135. California Law of Municipal Corporations** (2) II
California law governing the nature, regulation and control of the counti charter cities, sixth class cities, school districts and special districts. The creati alteration, dissolution, legal actions by and against, powers and duties; rights a liabilities of local governments.

**136. Administrative Law** (2) I
The law of public office and public officers, powers of administrative authoriti scope and limits of administrative powers, remedies against administrative action.

**(G)137A-137B. Constitutional Government** (2-2) Year, I
Modern government and politics; its theoretical foundations, institutions a problems. Emphasis will be on American experience with useful comparisons w other countries. Either semester may be taken first.

**(G)139A-139B. American Constitutional Development** (3-3) Year, I
A study of the work of the Convention of 1787 and of significant phases American constitutional law. Not open to students with credit for History 172A-172

**140A-140B. Principles of Public Administration** (3-3) Year, I
Semester I: The administration of public services, staff and line functio theories of organization and practices, and procedures of different types of governmen agencies.

Semester II: Principles and problems in governmental budgeting, performa and capital outlay, budget procedures, organization and administration of person programs, controls over administrative behavior, responsible bureaucracy and p fessionalism in the public services. Not open to students with credit in Polit Science 147A-147B.

42. **State Government** (3) II

A study of the political structure and its operation used in the carrying on of the inctions exercised by the states; state-federal relations; state-local government rela- ons; particular emphasis on California government.

43. **Municipal and County Government** (3) I

A study of the organization and its operation used to carry into effect the func- ons assigned to local governmental units; particular emphasis upon local government California.

14. **Introduction to Public Personnel Administration** (2) I

An introduction to the field, giving general coverage of the problems involved in cruitment, placement, supervision, etc., of public employees. Prerequisite: Permis- on of instructor.

15. **Public Personnel Management** (2) II

An advanced course involving detailed examination of management of personnel public service. Prerequisite: Permission of instructor.

6. **Wage and Salary Administration** (3) I

Problems of job analysis; major techniques of job evaluation, including ranking, assification, point system, factor comparison; problems of wage and salary admin- tration, incentive pay methods; merit rating plans. Not open to students with credit r Commerce 154.

7A-147B. **Public Administration** (2-2) Year, I

Administrative organization. Relationship between federal, state, and local vernments. Budget, personnel, management, and control. Not open to students with edit for Political Science 140A-140B.

8. **The Government of Metropolitan Areas** (2) I

A study of the governmental problems of metropolitanism; overlapping of gov- nments, services, planning and financing. The use of intergovernmental contracts r public service, proper public service areas, and special authorities.

i)150A-150B. **International Relations** (3-3) Year, I

A historical and analytical consideration of the basic factors—historic, geo- aphic, economic, ideologic, and strategic—which underly and condition the modern nflict between the "sovereign state" and the "community of nations." Fall semester: igins and development through the nineteenth century. Spring semester: Twentieth ntury experimentation and conflict.

1SP. **The Contemporary World** (1) II

A series of lectures by members of the faculty on selected problems of the current ernational scene. Reports required of students enrolled for credit.

2. **International Organization** (3) I

A critical analysis of the organization by which the international community ks to provide for the exercise of legislative, administrative and judicial functions the international level: Diplomatic and consular corps; conferences; administra- n through commissions and unions; amicable procedures for settlement of dis- tes; The League of Nations-United Nations experiment.

3. **Principles of International Law** (3) I

The function of law in the international community. The historical development the ideas and rules of international law and their place in the modern diplomatic l legal structure.

4. **International Law and the Courts** (3) II

A case study of the application of the rules of international law in national l international courts.

. **Dynamics of Modern International Crises** (3) I

The determination and analysis of facts surrounding international crises since rld War II; the evaluation of these crises and their effects upon external policies he United States and the operations of the United Nations. Prerequisite: Consent the instructor.

**158A-158B. American Foreign Policy** (3-3) Year, I
Lectures and reading in the field of American foreign relations since 1776, with special emphasis, in the second semester, upon affairs since 1900. A general survey course. Not open to students with credit for History 176A-176B.

**160. Government of the British Dominions** (3) II
Development of the new British Empire and imperial relations of the self-governing dominions; government of Canada, Australia, New Zealand, and South Africa; conditioning historical, economic and racial factors. Not open to students with credit for History 156B.

**162. Government of England** (3) I
The structure and functioning of English parliamentary system with emphasis upon present day political principles and parties.

**165. Governments of Latin America** (3) II
The governments of leading and representative Latin American states. Emphasis on the background and evolution of current political institutions and philosophies.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**167. Government of the Soviet Union** (3) I
Theory and practice of government in the Soviet Union, with some attention to Russian foreign affairs.

**198. Internship in Public Administration** (3-6) I, II
Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Admission by permission of the instructor.

**199. Special Studies in Political Science** (3) I, II
Directed study in research techniques in the field of political science. Limited to Political Science majors.

### Graduate Courses

**200A-200B. Seminar in Government** (2-2) Year, I, II

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)
An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

## PSYCHOLOGY

### IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *psychology* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Two plans are provided for the major: One for those students expecting to pursue the study of psychology beyond the A.B. degree; the other for those students who wish to extend their general education in the field of psychology.

The lower division requirements for all majors are: Psychology 5 and 6; six units in biology, physiology, and/or zoology; three units in philosophy; and six units in anthropology and/or sociology.

The upper division requirements for each major will be determined by the plan selected by the student, but a minimum of 24 upper division units in psychology is required for a major.

A *teaching major:* A major in psychology may be combined with two teaching minors for a general secondary credential. Refer to the outline of requirements for this credential.

### Minor

A *minor in arts and sciences* is offered in psychology. The minor must include at least 15 units of work in psychology, nine units of which must be from courses carrying upper division credit.

A *teaching minor* is not offered in psychology.

### Plan A Major

Plan A is for a nonprofessional major in psychology and is designed to provide the student with a greater understanding of his expanding group relations leading to happy and effective family and community living. The recommended pattern of courses for this program is not designed to facilitate graduate and professional study in psychology.

The upper division requirements for Plan A majors: Psychology 106, 131, 145, and electives to complete the major. It is expected that each student under Plan A will select, with the assistance of his adviser, a pattern of courses in line with his particular objectives in pursuing Plan A. For most students in Plan A, the following courses will be found particularly helpful: Psychology 105A, 107, 122, 132, 150, and 152.

To facilitate the purpose of Plan A the following courses in other departments are recommended as electives: Anthropology 1A-1B; Biology 1 or Zoology 1A-1B; Economics 1A-1B and 102; Health Education 90; Philosophy 1A-1B; Zoology 114 and 165; and courses in home economics.

### Plan B Major

The purpose of Plan B is to facilitate the specific preparation of those students who wish to pursue graduate and professional preparation in Clinical, Industrial and Personnel, and Theoretical-Experimental Psychology. To this end, three separate programs are suggested under Plan B to provide an undergraduate basic preparation for further study in these fields.

Upper division requirements for all Plan B majors: Psychology 104A, 105A, 160A or 160B, and additional courses to complete the major selected from one of the groups listed below. For each of the three patterns of special preparations under Plan B, the following courses are recommended:

*Preclinical:* Psychology 105B, 106, 131, 145, 150, 151, 152, 160A. The following courses are recommended in other departments: Anthropology 1A-1B; Biology 3 and 4, or Physiology 1A and 1C; Philosophy 1A-1B or 3A-3B, 20, and 129; Sociology 135 and 170; Speech Arts 176 or 179A-179B; and Zoology 165. A natural science minor is recommended.

In selecting courses and choosing electives, the student is urged to consult his adviser and the Bulletin on the requirements for special secondary credentials for school psychometrist and for correction of speech defects.

*Industrial and Personnel:* Psychology 121, 122, 131, 132, 145, 152, 160B. The following courses are recommended in other departments: Business 103A, and 153; Economics 1A-1B, 100A, 150, 151, 185, and 170; Philosophy 20; Political Science 144, and 145; Sociology 50, 51; and six units selected from Sociology 135, 170, 180, 190; and Speech Arts 4; a minor in business, economics, political science, or sociology is recommended.

*Theoretical-Experimental:* Psychology 104B, 131, 140, 145, 150, 160A, 160B, and 177. The following courses are recommended in other departments: Chemistry 2A-2B; Foreign Language; Mathematics 1, 3A, and 3B; Philosophy 1A, and 20; Physics 2A-2B, and 3A-3B; Physiology 1A and 1C; Zoology 1A-1B, 100, and 165. A mathematics or natural science minor is recommended.

### The Master of Arts Degree

The Master of Arts degree is offered in the department as part of the fulfillment of requirements for the School Psychologist credential. It is also possible to obtain a Master's degree if one obtains a School Psychometrist credential. Refer to these credentials and to the Master of Arts degree.

### Lower Division Courses

**(G)1. General** (3) I, II

An introduction to some of the facts, principles, and concepts which are basic to understanding human behavior.

**2. Psychology Laboratory** (1) I, II
Application of experimental methods to psychological problems. Includes design and execution of experiments. One lecture and three laboratory hours. Prerequisite: Psychology 1.

**5. Principles of Psychology: Basic Organization of Behavior** (3) I, II
The basic sensory, neural and motor mechanisms and their functions in human behavior. Prerequisite: Psychology 1 and sophomore standing.

**6. Principles of Psychology: Learning and Integrated Behavior** (3) I, II
Attending, perceiving, and learning, including social learning, personality development, and conditions of efficient work. Prerequisite: Psychology 1 and sophomore standing.

**11. Applied Psychology** (3) I, II
A survey of the application of the basic principles of psychology to business, education, industry, government, law, medicine and related fields. Prerequisite: Psychology 1.

**12. Mental Hygiene** (3) I, II
An examination and interpretation of the factors which go into the making of the person as he adapts himself to the social world about him. The development of the normal personality. Prerequisite: Psychology 1.

### Upper Division Courses

**104A. Statistical Methods in Psychology** (3) I, II
An introduction to the use of quantitative methods in psychology, with emphasis upon measures of central tendency and variability, graphic methods and percentiles, linear correlation, and the applications of the normal probability curve. Prerequisite: Psychology 1. Not open to students with credit for Economics 140 or Sociology 103.

**104B. Advanced Statistics** (3) II
A further study of quantitative methods in psychology with particular emphasi on methods of correlation, chi-square, and contingency, and an instruction to th analysis of variance. Prerequisites: Mathematics C and Psychology 104A, or permission of instructor.

**105A. Introduction to Psychological Testing** (3) I, II
The basic principles of testing. The selection and critical evaluation of group test of intelligence, personality, aptitude, interest and achievement. Prerequisite: One o the following courses: Psychology 5, 11; Education 102A, 102D. Not open for credit t students with credit for Education 105A.

**105B. Individual Mental Testing** (3) II
The principles of individual testing. Instruction and practice in the administratio of the Stanford-Binet and similar tests. Prerequisite: Psychology 105A and permissio of instructor.

**(G) 106. Developmental Psychology** (3) I, II
A study of the psychological development of the normal individual from concep tion through childhood, adolescence, maturity, and old age. Stress is laid upon th interdependence of the various periods of the individual's life. Prerequisite: Psychology 1.

**107. Psychology of Later Maturity** (3) II
The psychological, physiological, and sociological factors influencing behavior i the later years of life. Prerequisite: Psychology 1.

**121. Personnel and Industrial Psychology** (3) I, II
Psychological principles applied to problems of selection and assignment of indus trial personnel, employee training, and fatigue. Prerequisite: Psychology 104A, o Economics 140, or Sociology 103.

**122. Public Opinion Measurement** (3) II
The history, methods, and problems of public opinion and attitude measuremen Emphasis will be placed upon the polling of consumers and voters. Students will b given field experience. Not open to students with credit for Journalism 122.

**130. Educational Psychology** (2) I, II

To develop understanding of the applications of psychological research for effective classroom teaching. Observation and field work required. Prerequisite: Psychology 1. Not open to students with credit for Education 130.

**131. Foundations of Personality** (2) I

The human organism in its interaction with the environment and the resultant changes in the development of the personality. Prerequisite: One full year of psychology or equivalent.

**132. Personality Adjustment** (2) II

The appliction of the fundamental principles of personality to problems of adaptation. Mental hygiene as a local, state, and national problem. Prerequisite: Psychology 131 or permission of instructor.

**140. Physiological Psychology** (3) I, II

The neurophysiological basis of behavior, with particular attention to the psychophysiology of sensory and motor processes, emotion, bodily needs, and learning. Prerequisite: Psychology 5 and 6, or 10 units in biological sciences.

**(G)145. Social Psychology** (3) I, II

The major problems and findings concerning processes of social interaction, group behavior and group membership, and the socialization of the individual. Prerequisite: Psychology 1. Not open to students with credit for Sociology 145.

**150. Abnormal Psychology** (3) I, II

The psychology of behavior disorders, with emphasis on the amentias, neuroses, and psychoses. Prerequisite: One full year of psychology.

**151. Introduction to Clinical Appraisal** (3) I

A study of diagnostic devises in psychology, tests of clinical significance, ratings, interviewing for securing information. Projective and case study analyses; problems of insight, rapport, empathy, and prediction of individual behavior. Prerequisites: One of the following: Psychology 105A, 106, 131, 140, or 150.

**152. Introduction to Methods of Counseling** (3) II

An introduction to problems and methods of counseling and adjustment. The utilization of psychological principles and techniques in dealing with various types of guidance situations. Prerequisite: Enrollment limited to senior and graduate students in psychology or pre-social work.

**160A. Experimental Psychology** (3) I, II

Demonstrations of the principles and conditions of learning, perceiving, problem solving, and thinking. Methodology and design of experiments. Two laboratory sessions and one seminar period per week. Prerequisite: Psychology 5, 6, and 104A.

**160B. Experimental Psychology** (3) I, II

Demonstration of laws governing various sensory experience and motor activities. Experiments in space perception, errors of judgment, and conditions of work and fatigue. Two laboratory sessions and one seminar period per week. Prerequisites: Psychology 5 and 6.

**66. Honors Course** (Credit to be arranged) I, II

A special study arrangement for students admitted to the Honors Program. Enrollment through the Department Chairman, subject to the approval by the Committee on Honors. (See the Honors Program.)

**70. Comparative Psychology** (3) I

A study of the behavior of animals with a view to gaining a better understanding of human behavior. An analysis of the leading experimental work on senory discrimination, learning, and intelligence of each animal group, from amoeba to man. Prerequisites: Psychology 5 and 6.

**75. Theories of Learning** (3) II (Offered 1951-52 and alternate years)

A critical study of the facts, principles, and major theories of learning. Prerequisites: Psychology 1, 5, 6, 104A, and consent of the instructor.

**177. History of Psychology (3) II**
A survey of the historical background of modern psychology. Limited to psychology majors with senior standing.

**191. Practicum in Clinical Psychology (1-6) I, II**
A practicum in mental testing and clinical psychology in various state hospitals, mental hygiene clinics, and similar institutions. Prerequisite: Consent of the instructor.

**199. Individual Studies in Psychology (1-3) I, II**
Limited to students in the senior year. Permission to enroll must be obtained from a member of the staff. Maximum credit six units.

### Graduate Courses

**201. Seminar (2)**
A review, integration, and supplementation of the student's knowledge of psychology.

**205. Advanced Mental Testing (3)**
The theory of mental testing and a comprehensive survey of the various verbal and nonverbal individual mental tests.

**211. Advanced Clinical Psychology (3)**
A seminar and practicum in directive and nondirective counseling. The theory of and experience in the use of techniques available to the clinical psychologist.

**290. Bibliography (1)**
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study (1-3)**
An individual study course designed primarily for candidates for the master's degree.

**299. Thesis (3)**
Guidance in the preparation of a project or thesis for the master's degree.

# RECREATION

## IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

A *general major in arts and sciences in recreation* is offered for the A.B. degree Students desiring a concentration in this field should refer to the Recreation Curriculum in the section of the bulletin entitled: Preprofessional and Vocational Curricula.

### Minor

A *minor in arts and sciences* is offered in *recreation*. Lower division requirements: Two units of physical education activity courses, Physical Education 53, and two units chosen from Art 61B, or fields of dance, drama, or music. Upper division requirements: Recreation 165, 170A-170B, and 184A or 184B. Recommended: Physical Education 151. Consultation with the chairman of the department is advised.

A *teaching minor in recreation* is offered for the special secondary credential. Fo statement of requirements, refer to this credential.

### Upper Division Courses

**165. Administration of Community Recreation (3) II**
The principles of organization and promotion of leisure time and recreation activities. Course content covers growth of the recreation movement, administration o areas and facilities, program of activities, features, services, organization and administration problems. A required course for recreation minors.

**170A-170B. Recreational Leadership** (2-2) Year, I

Principles and practices in recreational leadership. Methods of instruction and special techniques in the activities of the recreation program. Attention to crafts, music, social programs, drama, special projects, dance, sports, camp-craft and outdoor education. Courses may be taken separately. Not open to students with credit for Physical Education 170A-170B.

**184A-184B. Field Work in Recreation** (3-3) Year, I

Observation and participation in supervised group activities in the field. Practical experience in the various public and semipublic community recreation agencies.

**199. Special Study in Recreation** (1-3) I, II

An opportunity is presented for extensive review of pertinent literature, individual research and advanced study of problems in the profession. Prerequisite: Approval of the chairman of the department. Maximum credit, 6 units.

### Graduate Courses

**204. Problems in Recreation** (2)

A survey of current problems facing the recreation profession is studied through a review of the literature, discussion of trends, observation of school situations together with the analysis and evaluation of actual problems. Written reports are required. Not open to students with credit for Physical Education 204.

## ROMANCE LANGUAGES

### IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *Romance languages* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: French 1, 2, 3, 4, 5, 6, and Spanish 1, 2, 3, 4, 5, 6. Recommended: History 4A-4B or 8A-8B (for those who emphasize Spanish in the upper division). Upper division requirements: A minimum of 24 upper division units in French and Spanish including French or Spanish 199. At least nine units of upper division courses must be taken in each language. A person majoring in Romance anguages must have a minor to be decided upon in consultation with his major dviser.

A *teaching major in Romance languages* is offered for the junior high and genral secondary credentials. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is not offered in Romance languages, but minors may e taken in French or Spanish.

A *teaching minor* in foreign languages, including Romance languages, is offered or the special secondary, and general elementary and kindergarten-primary credenials. Teaching minors are offered in French and Spanish for the general secondary redential. For specific information, refer to these credentials.

### Graduate Courses

**90. Romance Language Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliograhies in the field of the Romance languages, preparatory to the writing of a master's roject or thesis. Prerequisite: Nine units of upper division French or Spanish and raduate status.

# SOCIAL SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences in social sciences* is offered for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Six units in each of three of the following fields, the selection to be made on advise of the division adviser: (1) economics, (2) geography, (3) history, (4) political science, and (5) sociology-anthropology. Upper division requirements: A minimum of 30 units selected with the approval of the division adviser, as follows: Six to 15 units in each of three fields, provided that one of these fields be different from the fields selected for lower division work, and a 199 course. (Twelve units in social science courses may be counted toward pattern requirements in general education social science courses.)

A *teaching major in social sciences* is offered for the general junior high school and general secondary school credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is not offered in the social sciences.

A *teaching minor in social sciences* is offered for the special secondary, genera elementary, and kindergarten-primary credentials. For statement of requirements refer to these credentials.

# SOCIOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences*, is offered in *sociology* for the A.B. degree. Course in the major are in addition to 45 units in general education courses. Lower divisio requirements: Sociology 50 and 51. Upper division requirements: A minimum of 2 upper division units in sociology, including Sociology 103, 110, 135, 152, 153, and 17 or 174.

A *teaching major* is not offered in sociology; however, courses in sociology may b used as part of the *social science major* for the general junior high school credentia or the general secondary credential. For specific information, refer to the outlines o requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in sociology. The minor must include a least 15 units of work in sociology, nine units of which must be from courses carryin upper division credit.

A *teaching minor* is not offered in sociology for the general secondary credential however, courses in sociology may be used as part of the *social science minor* for t special secondary, the general elementary, and the kindergarten-primary credential For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**(G)50. Contemporary Social Problems** (3) I, II

Survey of modern social problems recognizing the sociological factors involve Emphasis on the scientific method of approach. An evaluation of various causes a solutions of problems. A prerequisite for upper division courses in Sociology. Soph more standing required. Not open to students who have credit for Social Science 40.

**(G)51. Principles of Sociology** (3) I, II

The development and use of the concepts applied to sociological analysis; t effects of isolation and social contacts, interaction, processes, forces, controls, collecti behavior and social progress. A prerequisite for upper division courses in Sociolog Sophomore standing required. Prerequisite: Sociology 50.

## Upper Division Courses

**103. Elementary Social Statistics** (3) I, II

Analysis and presentation of elementary material in the fields of sociology and social work. Tabular and graphic presentation, analysis of frequency distributions, trends, simple correlation, sampling and reliability techniques. Prerequisites: Mathematics A-B and Sociology 50 and 51. Mathematics C or 7A recommended. A prerequisite for most upper division sociology courses. Not open to students who have credit for Economics 140 or Psychology 104A or 104B.

**(G)110. Race Relations** (3) I

A study of the Negro, Oriental, and other minority groups in the United States. A study of mental capacities, education, cultural achievement, family life, delinquency and other social factors of each group. Race prejudice, racial consciousness, theories of racial superiority and inferiority will be considered. Prerequisite: Sociology 50, 51.

**120. Industrial Sociology** (3) II

Analysis of group relationships within economic organizations. Problems of leadership, morale and conflict. Some attention to the sociology of occupations and professions. Prerequisites: Sociology 50, 51.

**(G)135. Marriage and the Family** (3) I, II

Preparation for marriage. Prediction scales for evaluating success or failure in marriage. Parent-child relationships; factors in successful and unsuccessful marriages; higher education and the birth rate; married women in industry and professions; desertion and divorce. Not open to students who have credit for Sociology 45, or Home Economics 135.

**145. Social Psychology** (3) I, II

Personality as it develops in relation to social environment. Suggestion, imitation, leadership, the crowd, public opinion, social control, prejudice, propaganda, sex differences, race differences. Prerequisites: Psychology 1, 11, Sociology 50, 51. Not open to students who have credit for Psychology 145.

**152. History of Social Thought** (3-3) Year, I

The origin and development of social theory in Europe and America; consideration of the fields and specialization and research in contemporary American sociology. Prerequisite: Sociology 50, 51.

**153. Modern Social Theory** (3-3) Year, II

A study of theories basic to modern sociological research, including the viewpoints of European and American thinkers. Prerequisites: Sociology 50, 51, and 152.

**66. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**70. Social Disorganization** (3) I

Survey of many alleged abnormal phenomena in society as seen in society today n various forms of individual, family, community and world disorganization, such as rime, prostitution, extreme alcoholism, migratory workers, divorce, revolution and var.

**73. Criminology and Penology** (3) I

The extent and characteristics of crime; consideration of physical, mental, eco- omic, and sociological causes of crime; study of methods of penal discipline, prison abor, parole, and probation; programs of prevention. Prerequisite: Sociology 50, 51.

**74. Juvenile Delinquency** (3) II

The nature and extent of delinquency; the causative factors involved; methods of ontrol and prevention, with special attention to the protective and remedial measures ffered by the school, home, Juvenile Court, correctional institutions and camps, pro- ation and parole, and recreational agencies. Prerequisite: Sociology 50, 51, or permis- ion of the instructor.

**80. Population Problems** (3) I

Problems of population increase, migration, shifts in composition of population elative to age, sex, and racial distribution. Population practices and theories. Biolog- cal and geographical aspects of population problems. International population move- ents. Prerequisite: Sociology 50, 51 and 103.

**185. Community Welfare Organization** (3) II

An analysis of the structure and process of community organization for social welfare as well as the functional relationships between public and private welfare agencies. Field work will be required to study some of the social agencies of San Diego. Prerequisite: Sociology 50, 51 and Sociology 103, or permission of instructor.

**187. Urban Sociology** (3) I, II

A study of the structure and function of the modern city; types of neighborhoods; forms of recreation; social forces in a metropolitan area; types of urban personalities and groups; rural-urban conflicts of culture. Practical field studies required. Prerequisite: Sociology 50, 51 and 103.

**190. Fields of Social Work** (3) I, II

A survey of the nature of social work and the various kinds of social work which are found in the modern urban life. The student is familiarized with the various social agencies in the community, their problems and methods of work, by readings and field trips. Volunteer social work in some social agency recommended. Prerequisites: Sociology 50, 51, and 103.

**199. Special Studies** (1-3) I, II

Limited to students in the senior year. Permission to enroll must be obtaine from a member of the staff.

### Graduate Courses

**200A-200B. Seminar** (2-2)

**230. Principles of Social Case Work** (3) I

A study of the principles and practices of social case work; problems of cas recording and analysis. Directed field work and case studies. Prerequisites: Sociolog 190 or Psychology 152 or Education 233.

**231. Field Work in Social Case Work** (3) II

Supervised practice in local social work agencies. Prerequisite: Sociology 19 and 230.

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized biblio raphies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-3)

An individual study course primarily for candidates for the master's degree.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

## SPANISH

### IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *major in arts and sciences* is offered in *Spanish* for the A.B. degree. Cours in the major are in addition to 45 units in general education courses. Lower divisio requirements: Spanish 1, 2, 3, 4, 5, 6; French 1, 2, or German 1, 2, or Latin 1, Recommended: History 4A-4B or 8A-8B. Upper division requirements: A minimu of 24 upper division units, at least 21 units of which must be in Spanish, includi Spanish 199. The remaining three units may be selected from Geography 118, 119, 12 History 161, 162; Political Science 165; Spanish 115 or 116; or Comparative Liter ture 101A, 140A-140B, 152A-152B, 155, 158, 159, in consultation with the Chairma of the Department. A person majoring in Spanish must have a minor to be decided up in consultation with his major adviser.

A *major in arts and sciences* is offered in *Romance languages*. For specific info mation, refer to Romance languages in the section on Announcement of Courses.

A *teaching major* is offered in Spanish or Romance languages for the junior hi school and general secondary credentials. For specific information, refer to the credentials.

### Minor

A *minor in arts and sciences* is offered in *Spanish.* The minor consists of a minimum of 15 units to a maximum of 22 units of work in Spanish, six units of which must be from upper division courses.

A *teaching minor* is offered in Spanish for the general secondary, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

**(G)1. Elementary** (3) I, II

Pronunciation, oral practice, readings on Spanish culture and civilization, minimum essentials of grammar.

**(G)2. Elementary** (3) I, II

Continuation of Spanish 1. Prerequisite: Spanish 1 or one year of high school Spanish.

**(G)3. Intermediate** (3) I, II

Reading in Spanish of cultural material, short stories, novels or plays; oral ractice; outside reading with oral and written reports. Prerequisite: Spanish 2 or wo years of high school Spanish.

**G)4. Intermediate** (3) II

Continuation of Spanish 3. Prerequisite: Spanish 3 or three years of high school Spanish.

**5. Intermediate** (2) I, II

A practical application of the fundamental principles of grammar by means of ral and written work based on Spanish texts. Prerequisite: Spanish 2 or two years f high school Spanish.

**6. Intermediate** (2) II

Continuation of Spanish 5. Prerequisite: Spanish 5 or three years of high school panish.

**0. Conversation** (2) I

Practice in the spoken language; practical vocabulary; conversation on assigned opics; simple dialogues and plays. Prerequisite: Spanish 2 or two years of high school panish.

**1. Conversation** (2) II

Continuation of Spanish 10. Prerequisite: Spanish 10, or Spanish 3, or three ears of high school Spanish.

**G)15. Spanish Civilization** (2) I

The major currents and characteristics of Hispanic life and culture, as expressed rough the centuries in literature, art, philosophy, music and science. Conducted in nglish. No prerequisite.

**G)16. Spanish Civilization** (2) II

Continuation of Spanish 15. No prerequisite.

**. Intermediate Spanish** (3) I (Offered for last time in Fall of 1951)

Reading and composition; study of standard prose as basis for class work; llateral reading in prose and drama, with written reports in Spanish; dictation. lass work conducted mainly in Spanish. Individual conferences. Prerequisite: Spanish or four years of high school Spanish.

**0. Spanish Commercial Correspondence** (3) I

(Offered in Fall of 1952 and every two years thereafter)

A one-semester intermediate course in Spanish composition, directed along the ne of commercial correspondence. A practical course, with translation of business tters, and supplementary reading in Spanish on commercial subjects. Prerequisite: hree years of high school Spanish, or completion of Spanish 3 or 5.

**70. Spanish for Elementary-School Teachers** (3) II
Elementary Spanish to meet the needs of elementary-school teachers. Emphasis on the oral aspects of the language with reading centering around Mexico. Open only to students enrolled in the general elementary school curriculum. No prerequisite.

### Upper Division Courses

**101A-101B. Conversation and Composition** (3-3) Year, I
Translation into Spanish of moderately difficult English prose passages. Free composition in Spanish. Outside reading of modern Spanish plays, with written reports in Spanish. Oral practice in colloquial Spanish with extensive use of phonograph recordings. Prerequisite: Spanish 4 and 6, or Spanish D, or their equivalent, with a grade of C.

**102A-102B. Introduction to Spanish Classics** (3-3) Year, I (Offered in 1952-53
Reading from several types of classical literature. Lazarillo de Tormes an other novels of Roguery; selections from Don Quixote, and the Cien Mejores Poesia Castellanas; one drama each from the works of Lope de Vega, Calderon, Alarcon and Moreto; collateral reading and reports. Prerequisite: Spanish 4 and 6, or thei equivalent, with a grade of C.

**104A-104B. Spanish-American Literature** (3-3) Year, I (Offered in 1952-53
Reading from representative Spanish-American authors during the colonia revolutionary and modern periods. Lectures, class reading, collateral reading an reports. Prerequisite: Spanish 4 and 6, or their equivalent, with a grade of C.

**105A-105B. Modern Spanish Drama** (3-3) Year, I (Offered in 1953-54)
The development of the drama of Spain from the beginning of the nineteent century to the present time. Prerequisite: Spanish 4 and 6, or their equivalent, wit a grade of C.

**110A-110B. Novel and Short Story in Spain** (3-3) Year, I
The development of the novel and short story in Spain from 1830 to th present time. Prerequisite: Spanish 4 and 6, or their equivalent, with a grade of

**(G)115. Spanish Civilization** (2) I
An advanced course in Hispanic culture of the past and present, with emphasi on the arts, philosophy, and literature. Lectures, class discussions, outside reading written reports on individual topics. Conducted in English. Prerequisite: Sophomor standing.

**(G)116. Spanish Civilization** (2) II
Continuation of Spanish 115. Prerequisite: Sophomore standing.

**150. Spanish Phonetics** (3) II
A theoretical and practical study of Spanish phonetics. A study of vowels, cons nants, isolated words, and phonic groups. The principles of versification, and exercis in intonation. Especially recommended for prospective teachers of Spanish. Prerequ sites: Spanish 4 and 6, or their equivalent, with a grade of C.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**199. Comprehensive Reading and Survey Course** (3) II
Designed to fill up the gaps in the reading done in courses. Class meeting on a week for guidance, reports, and quizzes. Required of all seniors majoring in Spanis

### Graduate Courses

**201. Old Spanish** (2) I
A study of the language and literature of Spain from the 12th to the 15th ce turies. Prerequisite: Nine units of upper division Spanish and graduate status.

**204. Seminar in Spanish-American Literature** (2) II
Intensive investigation of some phase of Spanish-American literature. A sing country, an author, or some special problem will be studied and reported upon. P requisite: Nine units of upper division Spanish and graduate status.

290. **Bibliography** (1) See Romance Languages

298. **Special Study** (1-3)

An individual study course designed primarily for candidates for the Master's degree.

299. **Thesis** (3)

Guidance in the preparation of a project or thesis in physics for the Master's degree.

# SPEECH ARTS

## IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *major in arts and sciences* is offered in *speech arts* for the A.B. degree. Courses n the major are in addition to 45 units in general education courses. Lower division equirements: A minimum of 15 units of lower division courses in speech arts, specialzing in the field of dramatic art, radio, public speaking, or a guided combination of the hree. Upper division requirements: A minimum of 24 upper division units including Speech Arts 150 with an emphasis of 12 units in one area of concentration (theater, adio, public speaking, or speech pathology). A minor is suggested, but not required.

A *teaching major in speech* is offered for the general secondary and special secndary credentials. For a statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *speech arts.* The minor consists of a inimum of 15 units, or maximum of 22, nine units of which must be in courses carryng upper division credit.

A *teaching minor in speech arts* is offered for the general secondary, special secndary, general elementary, and kindergarten-primary credentials. For statement of equirements, refer to these credentials.

### Lower Division Courses

**Voice and Diction** (3) II

Exercises and drills to improve the quality, flexibility and effectiveness of the peaking voice leading to good usage in standard American speech. Preparatory to urther courses in public speaking and dramatic art.

**Oral Communication Laboratory** (1) I, II

Those who fail the speech test must take this course concurrently with Speech rts 3. This course provides training in articulation, voice control, vocabulary. Indiidual laboratory assistance on specific speech problems.

G)3. **Oral Communication** (2) I, II

Training in fundamental processes of oral expression; method of obtaining and ganizing material; outlining principles of attention and delivery; practice in conruction and delivery of various forms of speeches.

**Extemporaneous Speaking** (3) I, II

Practice in extemporaneous speaking on subjects of current interest, both national d local, with stress laid on the organization and delivery of content material. Forum scussion will provide speakers with the opportunity of assembling facts quickly to eet such questions as any audience situation might demand.

A. **Fundamentals of Interpretation** (3) I, II

Application of the principles involved in "making words come alive": Response thought and mood, sensory association, emphasis, climax. Practice selections in etry and prose.

B. **Intermediate Interpretation** (3) I, II

Oral reading of various types of material suitable for popular audiences: ories, humorous sketches, light and sentimental verse. Prerequisite: 11A or 55A.

**20. Remedial Speech** (1) I, II

Corrective laboratory training prescribed on the basis of vocalization tests mad on recording machine. Required of education majors who fail to meet speech require ments tests. Private assistance given to stutterers and lispers.

**54. Stage Make-Up** (2) I

Practice in the application of stage make-up including straight and characte Two laboratory periods per week.

**55A. Elementary Acting** (3) I, II

Speech and pantomime applied to the problems of characterization in grou scenes. This course is concerned with the discovery and development of talent and th appreciation of the actors' problems for directors and teachers. (32 laboratory hou required.)

**55B. Intermediate Acting** (3) I, II

Continuation of 55A emphasizing more emotional material from longer scene Some one-act plays will be produced from this class. (32 laboratory hours required. Prerequisite: 55A or previous training.

**56A-56B. Dramatic Production** (3-3) Year, I

A general survey of play production planned to present the whole organizati of the college and school theater, with emphasis on backstage practice, stagecraft, a elementary lighting. Crews for the departmental productions are organized in th class. Prerequisite: 55A or permission of the instructor is prerequisite for 56B.

**57. Elementary Stage Costume** (3) II

A study of pattern drafting, draping, color harmony and the use of fabrics f stage costuming. Students will receive practical training in the construction of sta costumes. Two lecture-demonstration and recitation hours and one laboratory per wee

**60A-60B. Argumentation and Debate** (3-3) Year, I, II

Obtaining and organizing of evidence and the construction and use of the brie study and discussion of current issues; the presentation of formal and informal debat Attention to intramural and intercollegiate debating.

**61A-61B-61C-61D. Intercollegiate Debate** (1-1-1-1) I, II

Students are limited to four units, including lower and upper division cours

**63A-63B-63C-63D. Verse Choir** (1-1-1-1) I, II

Participation in verse speaking chorus to develop quality, range of tone, a ability in dramatic visualization of poetry. Students are limited to four units, incl ing lower and upper division courses.

**81. Survey of Radio** (3) I, II

A course presenting the background, theory, and fundamentals of radio bro casting. The subject material includes history of broadcasting; types of radio progra broadcast operation.

**82. Radio Announcing** (3) I

The fundamentals of radio announcing. Class time will be divided betw lecture and laboratory practice of announcing styles. Voice training for radio will stressed. Prerequisite: Speech Arts 81.

**83. Radio Acting and Directing** (3) II

For students interested in the production of dramatic radio programs. Lecture a laboratory for radio techniques in characterization. The use of sound effects and mu cues and bridges will be considered. Emphasis will be on production analysis. Actors Radio Guild productions will be taken from this class. Prerequisite: Speech Arts

## Upper Division Courses

**108. Advanced Interpretation** (3) I, II

Analysis of techniques of literary composition as guides to oral interpretati Achievements of the creative artist as they affect the interpretative artist. Prereq site: 11A or 11B or permission of instructor.

**118A. Play Analysis** (3) I

Deals with the one-act play and its technique. New plays are read and discussed n class during their period of development.

**118B. Playwriting** (3) II

Analyses of long plays. Students engage in creative writing.

**20. Readings in Dramatic Art** (3) II

This course will deal with dramatic materials in which the student will study omplete plays for interpretation and characterization without memorization and cting techniques.

**40A-140B. Stage Design** (3-3) Year, I, II

The application of the principles of design, color and perspective to the design f settings for the production of period and modern plays. Students will learn to make ketches and models and paint the scenery for the departmental productions. Prerequiite: 56A-56B or permission of the instructor.

**42A-142B. Summer Theater Workshop** (3 or 6) Summer

A theater laboratory for those who wish to devote their entire time to training nd a variety of experiences in the summer theater program including acting, design, tagecraft, lighting, directing, and stage management. Prerequisite: Permission of the nstructor.

**45. Stage Lighting** (3) II

For directors, designers and technicians in school and community theaters conerning the principles and practice of light, color, lighting instruments, and control quipment, including the design and planning of lighting of plays. Students will serve s light crews for departmental production.

**50. Phonetics** (3) I, II

Auditory and kinesthetic analysis of the sounds of the English language. Valuble as a corrective course in pronunciation and articulation. Required of speech majors nd those seeking the Speech Correction Credential.

**52. History and Design of Costume** (stage) (3) II

A study of costume from Egypt to the present. Emphasis on the use of historical ostumes on the stage. Costume designs for one stage production. Drawing and paintg experience desirable but not necessary.

**54A-154B. History of the Theater** (3-3) Year, I, II

A study of the theater from primitive times to the present. Special attention will given to the theater as a mirror of the social and cultural background of the various untries and periods in which it is studied. Carries aesthetics credit. (Speech Arts 54B may be taken without 154A.)

**55. Advanced Acting** (3) I

Problems in characterization: Acting styles of the Elizabethan and Eighteenth entury periods. Prerequisite: 55A-55B or the equivalent.

**56. Advanced Dramatic Production** (3) II

Problems and projects in scenery and lighting in connection with the workshop d major productions of the department.

**59. Stage Direction** (3) I

Planned for prospective directors of plays in schools, colleges and community eaters. Through lectures, discussions, and exercise projects the student will become quainted with the principles, procedure and methods of stage direction. Each student ill be required to direct several short plays during the course.

**0. Stage Direction Laboratory** (1) I, II

This will consist of experience in directing a one-act play before a departmental public audience. It may be taken with or it may be preceded by 159. Prerequisite corequisite: 159. May be repeated once for credit.

**1-A161B-161C-161D. Advanced Intercollegiate Debate** (1-1-1-1) I, II

Students are limited to four units, including lower and upper division courses.

**162. Advanced Argumentation** (3) I

Presents a further and more detailed study in the preparation of briefs and th organizing of evidence; opportunity for participation in intramural debates, intercollegiate debate, and community speaking activity. Prerequisite: 2A or 2B.

**163A-163B-163C-163D. Advanced Verse Choir** (1-1-1-1) I, II

Participation in verse speaking chorus to develop quality, range of tone, an ability in dramatic visualization of poetry. Students are limited to four units, including lower and upper division courses.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**176. Problems of Speech Correction and Articulation** (3) II

Analysis and discussion of the major articulatory problems as encountered i public school work, particularly in California. Required of all students for the speec correction credential. (Minimum of 25 laboratory hours required.) Not open to student with credit for Education 176.

**177. The Teaching of Lip Reading** (2)

History, theory and methods of lip reading. Aids for the classroom teacher program and materials of instruction for the specialized teacher. Opportunities fo practice teaching are offered. Not open to students with credit for Education 17

**179A-179B. Nervous Speech Disorders** (3-3) Year, I

Clinical survey of newest methods of speech correction with special emphas given to stuttering. (Minimum of 25 laboratory hours required per semester.) Require course for Special Corrective Credential. Not open to students with credit in Education 179A-179B. (Speech Arts 179A is a prerequisite for 179B.)

**180A-180B. Rehearsal and Performance** (1) I, II

One unit of technical practice followed by one unit of acting. One unit may b repeated, making a total of three units.

**181. Radio Sales and Advertising** (3) I, II

A study of advertising trends in radio advertising; time buying, audience su vey, and program types in relation to products to be advertised via radio broadcastin Includes publicity and promotion of radio programming organization of a rad station; relationship between the business and entertainment factors of radio broa casting. Open to students with consent of instructor. Not open to students with cred for Business 181.

**182. Advanced Radio Production** (3) II (Offered in 1951-52 and alternate year

Advanced radio production techniques. Students are responsible for the exec tion of Radio Guild productions. Projects in program types include the use of sou and music. Material includes production analyses and script editing. Prerequisit Speech Arts 83.

**183. Radio Continuity and News Writing** (3) II

Correlates news editing and writing with announcing styles. Radio news pr cedure and organization of a radio news staff; analysis of reportorial and commenta styles. Includes production techniques of "on-the-spot" and multiple point picku broadcasts. Registration with permission of instructor. Not open to students wi credit for Journalism 183.

**184. Radio Writing** (3) II

Includes original half-hour scripts, play or novel adaptations for radio, and t documentary program. Study of pacing and timing, the use of sound and music f bridges and cues, and radio format. Plays written by students are read and discuss during their development; the better plays to be produced by the Radio Guild f broadcast. Open to students with consent of instructor.

**191. Organized Discussion** (3) II

Consideration of the symposium, the panel, the open forum, the business sessio and varieties of conference speaking. Emphasis upon organization and presentatio Attention to parliamentary procedure for informal groups. Prerequisite: Speech A 60 or equivalent.

**192A-192B. Advanced Public Speaking** (3-3) Year, I, II
Careful attention given to the preparation and delivery of longer speeches, using as models classics in the field of oratory. Prerequisite: 4.

**199. Special Problems in Speech and Dramatic Art** (1-3) I, II
May be repeated once in different departmental area for a total of six units.

### Graduate Courses

**200. Seminar in History of Oratory** (2) II
An advanced course for those already familiar with the techniques and theories of public speaking and debate. A history of public address from the time of Greece up to the present, organized around the theories of representative orators and their relationships to the social environment.

**221. Articulatory Problems of Speech** (2) I
Analysis and discussion of articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Prerequisite: Speech Arts 150.

**245. Seminar in Technical Practice** (2)
Advanced technical projects in planning school theaters and their mechnical equipment, lighting control and lighting instruments and the design of lighting layouts for elaborate plays will be assigned, executed and discussed.

**259. Seminar in Stage Direction** (2)
An advanced course for those who are ready to direct full-length plays and to consider the problems of handling various styles and types of drama in the great periods of dramatic literature for modern production. For graduates with experience in directing plays.

**260. Seminar in Oral Interpretation** (2)
Aesthetic discipline applied to oral reading of masterpieces of poetry and prose. Analysis of thought and emotional content and aesthetic form, including unity and harmony, variety and contrast, balance and proportion, rhythm.

# ZOOLOGY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in *zoology* for the A.B. degree. Courses n the major are in addition to 45 units in general education courses. Lower division equirements: in the major, Zoology 1A-1B; in related fields, Botany 1 or 2A-2B, hemistry 1A-1B or 2A-2B, Physics 2A-2B, 3A-3B. Upper division requirements: 4 units in zoology to include Zoology 100, 101, 106, 155. A minor is not required. eading knowledge of a foreign language is recommended.

A *major in arts and sciences* is offered in *zoology* for the B.S. degree. Courses n the major are in addition to 45 units in general education courses. Lower division equirements: in the major, Zoology 1A-1B; in related fields, Botany 1 or 2A-2B, hemistry 1A-1B or 2A-2B, Physics 2A-2B, 3A-3B, Geology 2, 3, and Mathematics A-7B. Upper division requirements: 36 units in zoology or approved related fields o include Zoology 100, 101, 106, 155. A minor is not required. Reading knowledge of a oreign language is recommended.

A *teaching major* is not offered in zoology; however, courses in zoology may be sed as part of the *life science major* for the general secondary credential or as part of he *general science major* for the general junior high school credential. For specific nformation, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in zoology. The minor must include at least 5 units of work in zoology, six units of which must be from courses carrying upper ivision credit.

A *teaching minor* is not offered in zoology ; however, it may be used as part of the *teaching minor in life science* for the general secondary credential, or as part of the *teaching minor in general science* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. General Zoology** (4-4) Year, I, II

An introduction to animal biology. Designed for those who expect to do advanced work. Two lectures and 6 hours of laboratory work each week. Prerequisite for Zoology 1B ; Zoology 1A.

**8. Human Anatomy** (3) I

A study of human structure through the use of models, prepared dissections and microscope slides. Prerequisite : High school biology, Biology 3, 1, or Zoology 1A Two hours of lecture and three hours of laboratory per week. Required of prenursing students. Credit reduced to 2 units if student has credit for Zoology 20.

**20. Human Anatomy and Physiology** (3) II

An elementary course in human anatomy and physiology. Prerequisite : Hig school biology, or Biology 1 or 3 or Zoology 1A. Lectures three hours per week. Credi reduced to two units if student has credit for Zoology 8 or Physiology 1A.

### Upper Division Courses

**100. Embryology** (4) I, II

The development of vertebrates as illustrated by the frog, chick, and pig. Si hours of laboratory and two hours of lecture and quiz per week. Prerequisite : Zoolog 1B, or Biology 3 and consent of instructor.

**101. General Physiology** (4) II

Fundamentals of plant and animal functions. Two lectures and two laborator periods per week. Prerequisites : Biology 3 and consent of instructor, or Zoolog 1A-1B, Chemistry 1A-1B or Chemistry 2A-2B.

**104. Microtechnique** (3) I, II

Introduction to methods of preparation of tissues for microscopic study. Six hour of laboratory and one hour of lecture per week. Prerequisite : One year college chem istry and Zoology 1A-1B, Botany 2A-2B, or Biology 4 and consent of instructor.

**106. Comparative Anatomy of the Vertebrates** (4) I

Dissection, study and comparison of organ systems of typical vertebrates. Tw hours per week of lecture and six hours of laboratory. Prerequisite : Zoology 1B, o Biology 3 and consent of instructor.

**108. Histology** (4) I

A study of the microscopic structures and differentiation of tissues and organs the vertebrates, especially mammals. One lecture and six hours of laboratory per wee Prerequisites : Zoology 1A-1B ; recommended Zoology 100.

**109. Hematology** (3) I, II

Microscopic and chemical examination of blood. One lecture and two laborator periods per week. Prerequisite : Chemistry 102.

**110. Limnology** (4) II

A biological survey of available fresh waters, followed by a selected problem o the relationship of an organism or group of organisms to the environment. Prerequ sites : Zoology 1A-1B and elementary chemistry.

**112. Marine Invertebrates** (4) I

Identification and study of behavior and life histories of invertebrates of the Sa Diego region. Frequent collecting trips to the beaches required. Prerequisite : Zoolog 1A, or Biology 4 and consent of instructor. Two hours of lecture and six hours of labor tory or field work per week.

**113. Ornithology** (4) II

The study and identification of birds, especially those of the Pacific Coast and the San Diego region. One hour of lecture and six hours per week of laboratory, or field excursions, and a field project. Prerequisite: Zoology 1B, or Biology 4 and consent of instructor.

**113F. Field Ornithology** (1) I

A field study of local birds with special emphasis upon the fall migration.

**115. Cold-blooded Vertebrates** (3) II

The classification, natural history and distribution of fishes, amphibians, and reptiles. Practice in the techniques of collection and the use of keys for identification. Frequent field trips. One lecture and two laboratory periods per week. Prerequisites: Zoology 1B, or Biology 4 and consent of instructor.

**118. Mammalogy** (3) II

Lectures on classification, adaptations, and ecological relationships of mammals. Laboratory and frequent field trips to familiarize students with local mammals, taxonomic procedures and field techniques. One lecture and six hours of laboratory per week. Prerequisites: Zoology 1A, or Biology 4 and consent of instructor.

**119. Field Zoology** (4) I, Summer

Designed to give a working knowledge of the animals of Southern California; field trips, lectures and laboratory emphasizing ecology, behavior, observational methods, collecting techniques and taxonomy. Prerequisite: A course in college biological science or permission of instructor.

**121. General Entomology** (3) I

The classification, life history, structure, and physiology of insects. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor. Two hours of lecture and three hours of laboratory per week.

**122. Systematic Entomology** (1-2) II

Classification of insects with especial emphasis on a group of insects of the student's choice. To be taken with or to follow 121. May be repeated for credit but with a total of not more than 3 units. Three to six hours of laboratory work each week.

**125. Economic Entomology** (4) II

Course designed for students of agriculture and horticulture. Emphasis is placed on determination and control of insects affecting plants. Quarantine measures are also studied. Two lectures and two laboratory periods per week. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor.

**126. Medical Entomology** (3) I

The role of insects and other arthropods in transmission and causation of human diseases. Three hours of laboratory and two hours of lecture per week. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor.

**128. Parasitology** (4) I

Study of animal parasites with special reference to those of man. Laboratory including identification of important parasites of man, and collection and preservation of local forms. Two hours of lecture and six hours of laboratory per week. Prerequisite: Zoology 1A-1B, or Biology 4 and consent of instructor.

**(G) 150. Readings in Biology** (2) II

Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles, ecology, economic zoology, zoogeography, breeding habits, animal behavior. Not open to students who have credit for Botany 150. Prerequisite: Biology 3 or equivalent.

**153. Economic Biology** (2) I

Study of uses of plants and animals to man and their destructive effects. Consideration also given to general methods of control and conservation. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor. Not open to students who have credit for Botany 153.

**155. Genetics** (3) II
Principles of plant and animal genetics, with experiments and demonstrations illustrating the mechanisms of heredity. Two hours of lecture and three hours of laboratory per week. Not open to students with credit for Botany 155. Prerequisites: Zoology 1A-1B, or Botany 2A-2B, or Biology 3 and consent of instructor.

**(G) 160. Evolution** (2) II
The development of theories of evolution. Two lectures per week. Prerequisite: Biology 3 or equivalent. Not open to students with credit for Botany 160.

**(G) 165. Human Heredity** (2) I
Presentation of selected principles of heredity as related primarily to human inheritance. Designed primarily for nonscience majors. Two lectures per week. Not open to students with credit for Zoology 155 or Botany 155.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**199. Special Study** (1-3) I, II
Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least 15 units of zoology with a grade of A or B. May be taken for a maximum of six units.

## Graduate Courses

**200. Seminar** (3) I
Especial emphasis will be placed on current concepts in the various fields of biology including problems of migration, distribution, speciation, evolution. Required of all graduate students.

**202. Hydrobiology** (2) II
A course in aquatic ecology with special emphasis on fresh water but with reference to marine biology.

**213. Advanced Studies in Ornithology** (2) I
Lectures and seminar on advanced problems of morphology, distribution, behavior and classification of birds.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (2-5)
An individual study course designed primarily for candidates for the master's degree.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

# PROVISIONAL CURRICULUM

This curriculum is for the purpose of assisting provisional students in attaining regular status in a curriculum which leads to the A.B. degree. Students in the provisional program are given close supervision in selection of courses and are placed in classes specially designed to aid in adjustment to the college program.

Reclassification to regular status may be obtained upon the completion of at least 24 units of work of "C" grade with an over-all grade point average of 1.0, or upon recommendation of a reclassification committee. Reclassification must ordinarily take place within the first year of college work. Students who do not so reclassify will be placed on probation. (See Probation and Disqualification.)

The courses in the provisional curriculum are open only to students in provisional status. Provisional students in their first college year must select three courses each semester from the list of subjects in the provisional curriculum. All other courses selected to complete the student's program may be chosen from the regular schedule of courses or from additional courses in the provisional curriculum with the approval of the adviser.

## A SUGGESTED PROGRAM FOR PROVISIONAL STUDENTS

| First Year | *Units* | |
|---|---|---|
| | *1st Sem.* | *2d Sem.* |
| Physical education activities | ½ | ½ |
| English 41 and 42 | 3 | 3 |
| Psychology 40 and Sociology 45 | 3 | 3 |
| Social Science 40 and 45 | 3 | 3 |
| Physical Science 40 and Biology 40 | 3 | 3 |
| Speech Arts 3 and Health Education 21 | 2 | 2 |
| Electives | 2 | 2 |
| | 16½ | 16½ |

## COURSES OF INSTRUCTION

### BIOLOGY

**(G)41. Man and His Biological World** (3) I, II

General concepts of biology with emphasis on the biology of man in relation to modern life. Equivalent of Biology 1. Laboratory credit for general education may be obtained by following Biology 40 with Biology 4.

### ENGLISH

**40. English Fundamentals** (2) I, II

Elements of composition. Drill in grammar, usage, vocabulary building, reading skills, theme writing. Equivalent of English A. This course is required of students in the provisional program who fail the English examination. This course is a prerequisite for other English courses. May be counted toward graduation credit but may not be used for the general education requirement.

**(G)41. English Composition** (3) I, II

Composition stressing exposition. Reading from essays and articles. Prerequisites: Passing mark in English A qualifying examination or credit for English 40. Equivalent of English 1.

**(G)42. Freshman Literature** (3) I, II

Literature, mainly contemporary, is read for its ideas, especially in relation t human problems and their solution. Practice in writing is continued. Required of al Provisional students. Prerequisite: English 41. Equivalent of English 2.

## PHYSICAL SCIENCE

**(G)41. Man and His Physical World** (3) I, II

A general education course concerning the nature of the scientific method an selected topics in physical science. Materials will be chosen from physics, chemistry astronomy, and geology to provide an understanding of the relations of physical scienc to modern life. Equivalent of Physical Science 1.

## PSYCHOLOGY

**(G)41. Psychology and Life** (3) I, II

An elementary survey of normal adult psychology, descriptive and organizational; the subjective and objective aspects of behavior. Furnishes basis for all othe courses in psychology and is prerequisite therefor. Equivalent of Psychology 1.

## SOCIAL SCIENCE

**(G)40. Contemporary Problems** (3) I, II

A survey of political, social and economic forces with background material fo understanding human problems. Equivalent of Sociology 50.

**(G)45. American Democracy** (3) II

The democratic concept of self-government, its background and growth, with a emphasis on the American use of democratic principles. Includes a study of democrac in a relative and comparative approach to our modern world and other forms of government. Satisfies the U. S. Constitution requirement for graduation.

## SOCIOLOGY

**(G)45. Marriage and Family** (3) I, II

Emphasizes preparation for successful marital adjustment by presenting mat rials that will help students learn to solve their own courtship, marriage, and famil problems. A general education course in social science and also in family life educatio

# DIRECTORY

## 1950-1951

(Date after name indicates when appointed to faculty)

HEPNER, WALTER R. (1935) -------- President
A.B., M.A., Ed.D., University of Southern California.

ACKLEY, JOHN W. (1947) -------- Associate Professor of Speech Arts
A.B., University of Redlands; M.A., and two years of graduate study at the University of Southern California.

ADAMS, EILEEN (Mrs. Bert) (1949) -------- Junior Librarian
A.B., Willamette University; B.S., University of Denver.

ADAMS, JOHN R. (1928) -------- Professor of English
A.B., A.M., University of Michigan; Ph.D., University of Southern California.

ALCORN, MARVIN D. (1941) -------- Associate Professor of Education
A.B., Southwestern College; A.M., Teachers College, Columbia University; Ed.D., University of Southern California.

ALLEN, WILLIAM H. (1950) -------- Coordinator of Audio-Visual Services
Assistant Professor of Education
A.B., University of California at Los Angeles; M.A., Claremont Graduate School; Ed.D., University of California at Los Angeles.

AMSDEN, GEORGIA C. (1925) -------- Associate Professor of Secretarial Management
Diploma, Gregg College, Chicago; special secretarial training in various colleges.

ANDERSON, GRAYDON K. (1949) -------- Assistant Professor of Economics
A.B., Willamette University; two years of graduate study at University of Minnesota and University of Wisconsin.

ANDREWS, JULIA G. (Mrs. F. S.) (1947) -------- Assistant Professor of Art
A.B., Northwestern University; M.A., Columbia University; two and one-half years of graduate study at Teachers College, Columbia University.

APPLE, JOE A. (1947) -------- Professor of Education
A.B., Southeastern State College; M.A., University of Oklahoma; Ed.D., Teachers College, Columbia University.

ATKINSON, DAVID F. (1949) -------- Instructor in Accounting and Business Management
A.B., San Jose State College; M.A., Stanford University; graduate study at Redlands University. On military leave, January, 1951.

BACON, GUINIVERE KOTTER (Mrs. George) (1928)
Associate Professor of Education
B.S., Utah Agricultural College; M.A., Stanford University; one year of graduate study.

BAIRD, OSCAR (1921) -------- Professor of Physics
B.A., University of Wisconsin; M.A., University of California. Three years graduate study at University of Minnesota, University of California, University of Southern California and University of Oregon.

BAKER, CLIFFORD H., JR. (1937) -------- Assistant Professor of Spanish
A.B., San Diego State College; M.A., and four years of graduate study at the University of California.

BALLANTINE, FRANCIS A. (1949) -------- Assistant Professor of Education
A.B., Michigan State Normal College; A.M., Ph.D., University of Michigan.

BARNHART, KENNETH EDWIN (1939) -------- Professor of Sociology
A.B., Southwestern University; B.D., Southern Methodist University; Ph.D., University of Chicago.

BECKER, CALLIE D. (Mrs. E. J.) (1946) -------- Senior Librarian
A.B., Shorter College; B.S. in L.S., Emory University.

BENTON, CARL W. (1948) -------- Instructor in Physical Education
B.S., University of California at Los Angeles; M.S., University of Southern California. On Military Leave February, 1951.

BIRCH, AILEEN J. (Mrs. C. E.) (1949) -------- Instructor in Education
A.B., San Diego State College; graduate study at Claremont College.

BLOCK, EDWARD A. (1946)________________________Associate Professor of English
A.B., M.A., Ph. D., University of California.

BRITTAN, MARTIN R. (1950)______________________________Instructor in Zoology
A.B., San Jose State College; Ph. D., Stanford University.

BROADBENT, HARRY H. (1949)__________Assistant Professor of Physical Education
A.B., University of Oklahoma; M.S., University of Pennsylvania.

BROOKS, BAYLOR (1931)__________________________Assistant Professor of Geology
B.A., Stanford University. Two years graduate study at University of Arizona and Stanford University.

BROWN, ELIZABETH McPIKE (Mrs. L. P.) (1926)____________Professor of French
Ph.B., M.A., Ph.D., University of Chicago; one year graduate study at the Sorbonne, Paris, France; Certificat d'Etudes Françaises; Diplôme de l'Association Générale de Phonétique, Paris, France; Officier d'Académie.

BROWN, EUGENE P. (1947)____________________Associate Professor of Accounting
B.S., Southeastern Teachers College; B.A., M.A., University of Oklahoma. One year graduate study at University of Chicago, University of Southern California and University of Mexico.

BROWN, LESLIE PARKER (1922)________________Professor of Spanish and French
B.A., Yale College; M.A., Harvard University; Ph.D., University of Southern California.

BRUBECK, HOWARD R. (1950)______________________Associate Professor of Music
B.A., San Francisco State College; M.A., Mills College.

BRUNER, WILLIAM S. (1948)______________________Assistant Professor of English
B.S., University of Virginia; M.A., Claremont College.

BRYDEGAARD, MARGUERITE A. (Mrs. H.) (1936)_Associate Professor of Education
A.B., San Diego State College; M.A. and graduate study at Claremont College

BURNETT, GAIL A. (1947)__________________________Assistant Professor of English
A.B., Randolph-Macon Woman's College; M.A., University of California at Los Angeles; Ph.D., University of Southern California.

CAMERON, ROY ERNEST (1929)____________________________Professor of Economics
A.B., Ph.D., University of California.

CAMPBELL, LOIS B. (1947)______________________Assistant Professor of Education
A.B., University of California; M.A., Teachers College, Columbia University.

CARLSON, HILDING B. (1948)
Coordinator, Personnel Services; Professor of Psychology
Ph.B., M.S., Ph.D., University of Chicago.

CARLSON, THORSTEN R. (1948)
Principal of Campus Laboratory School; Associate Professor of Education
B.E., St. Cloud State Teachers College; M.A., Ph.D., University of Minnesota.

CASSEL, RUSSELL N. (1949)_____________________Assistant Professor of Education
B.S., Millersville State Teachers College; M.Ed., Pennsylvania State College Ed.D., University of Southern California. Resigned February, 1951.

CAVE, MARY F. (1946)_________________Assistant Professor of Physical Education
B.S., University of North Dakota. Graduate study at Bennington College and University of California at Los Angeles.

CHADWICK, LEONARD E. (1949)________________Assistant Professor of Economics
B.S. and two and one-half years graduate study at the University of California

CHRISTY, LEO J. (1950)______________________________Assistant Professor of Music
B.S., Indiana University; B.S., M.S., University of Illinois.

CHURCHILL, CHARLES W. (1949)________________Assistant Professor of Sociology
A.B., University of Newark; M.A., Ph.D., New York University.

COMIN, NORITA (1949)______________Acting Assistant Professor of Home Economics
B.S., University of Minnesota.

CORBETT, KATHERINE E. (1921)________________Associate Professor of Education
B.Pd., Michigan State Normal College; B.S., A.M., Teachers College, Columbia University.

CORRIGAN, ROBERT F. (1947)________________Assistant Professor of Speech Arts
A.B., University of Michigan; M.A., University of Iowa.

CROUCH, JAMES ENSIGN (1932)___________________________Professor of Zoology
B.S., M.S., Cornell University; Ph.D., University of Southern California.

CUNKLE, ELIZABETH C. (Mrs. L.) (1948)______________________Junior Librarian
A.B., University of California; B.S. in L.S., Columbia University. Graduate study University of California.

CUNNINGHAM, CORNELIUS C. (1947)--------------------Professor of Speech Arts
A.B., Beloit College; M.A., Northwestern University; Ph.D., University of Iowa.

CUTTER, DONALD C. (1950)----------------------------------Instructor in History
A.B., M.A., Ph.D., University of California.

DeBRECHT, EUGENE F. (1949)
Coordinator of Extension Services; Assistant Professor of Marketing
A.B., San Francisco State College; M.A., Stanford University. On military leave, April, 1951.

DEPUTY, ERBY CHESTER (1931)-------------------------Professor of Education
A.B., University of Denver; A.M., Ph.D., Columbia University.

DICKHAUT, FLORENCE LILLIAN SMITH (Mrs. C. A.)--------Professor of English
A.B., Northwestern University; M.A., University of Chicago.

DIRKS, JOHN H. (1947)---------------------------------Assistant Professor of Art
A.B., San Diego State College. Graduate study at University of Southern California.

EAGLE, JOHN E. (1946)-------------------------Associate Professor of Mathematics
B.S., Montana State College; M.A., Ed.D., Stanford University.

EARNEST, SUE W. (Mrs. L. E.) (1947)--------------Associate Professor of English
A.B., San Diego State College; M.A., Ph.D., University of Southern California.

EELLS, KENNETH W. (1949)-------------------Associate Professor of Psychology
A.B., George Washington University; M.A., Ph.D., University of Chicago.

EMERSON, ARTHUR T. (1949)----------Acting Assistant Professor of Mathematics
B.S., U. S. Naval Academy. One year graduate study at Naval War College.

EVENSON, PATTEE E. (1949)-------------------------Associate Professor of Music
B.S., University of Minnesota; M.M., University of Michigan; specialized training at Universities of Minnesota, Michigan, Southern California, and Eastman School of Music; private instruction in Paris, London and the United States.

FELTON, JOHN R. (1948)------------------------Assistant Professor of Economics
B.A., M.A., and one and one-half years of graduate study at the University of California.

FERRIS, HORACE G. (1949)--------------------------------Instructor in Physics
B.A., Pomona College; M.A., Ph.D., University of California. Resigned January 1951.

FLYE, RICHARD C. (1950)----------------------------Assistant Professor of Music
B.A., University of Virginia; M.A., and Professional Diploma, Columbia University.

FOLEY, ROLLA (1950)--------------------------------------Lecturer in Education
B.S., Eastern Illinois State College; M.M., University of Southern California.

FRIEDRICH, KURT (1949)-----------------------Assistant Professor of Education
A.B., Columbia College; M.A., Columbia University; Ed.D., Columbia Teachers College.

GELDREICH, EDWARD W. (1947)---------------Assistant Professor of Psychology
A.B., M.A., University of Cincinnati; three years graduate study at the University of Chicago.

GENERALES, MINOS D. (1949)-------------Assistant Professor of Political Science
Degree in Law and Political Science, including six years of graduate study at the University of Athens, University of Paris Law School, and Institute of International Studies.

GERMANN, LULA (1926)-----------------------------------------Senior Librarian
B.S., State Teachers College, Hays, Kansas.

GIBSON, ERNEST DANA (1947)----------Associate Professor of Business Education
Secretarial and Office Management
B.S., University of Minnesota; M.A., Colorado State College of Education; Ed.D., New York University.

GJERDE, CLAYTON M. (1948)--------------------Assistant Professor of Education
A.B., Augsburg College; M.A., Ph.D., University of Minnesota.

GLEASON, JOHN M. (1930)--------------------Associate Professor of Mathematics
A.B., University of California at Los Angeles; M.A., University of California. Two years graduate study at University of Southern California, University of California at Los Angeles and Claremont Colleges.

GRESS, IRVIN S. (1946)--------------------------Assistant Professor of Psychology
A.B., George Washington University; Ed.M., University of Pittsburgh. Two years graduate study at Columbia University, Pennsylvania State College and University of Pittsburgh.

GROSS, GEORGE C. (1949)------------Acting Instructor in English
A.B., San Diego State College; one year graduate study at San Diego State College and University of Southern California.

GULICK, SIDNEY L., JR. (1945)------------Professor of English
B.A., M.A., Oberlin College; Ph.D., Yale University.

HAMMACK, ISABELLA STEWART (1936)--------Associate Professor of Education
A.B., M.A., and one year graduate study at the University of California.

HARCLEROAD, FRED F., JR. (1946)------------Associate Professor of Education
A.B., M.A., Colorado State College of Education; Ph.D., Stanford University.

HARRINGTON, AWONA B. (1949)------------Junior Librarian
A.B. and one year graduate study at San Diego State College; M.S. in L.S., University of Southern California.

HARRINGTON, NEIL J. (1948)------------Instructor in Chemistry
B.S., Monmouth College; one year of graduate study at DePaul University and Northwestern University. On military leave, October, 1950.

HARRIS, VINCENT C. (1950)------------Assistant Professor of Mathematics
B.A., M.A., Ph.D., Northwestern University.

HARVEY, ALBERT R. (1949)------------Assistant Professor of Mathematics
B.S., Bates College; A.M., Ph.D., Harvard University.

HARVEY, DOROTHY R. (Mrs. F. A.) (1924)----------Assistant Professor of Botany
A.B., San Diego State College; M.A., University of Southern California. One year graduate study at University of Southern California and University of Chicago.

HARWOOD, ROBERT DANIEL (1928)------------Professor of Zoology
B.A., Pomona College; Ph.D., Cornell University.

HASKELL, HARRIET (1940, except 1943-45)---------Assistant Professor of English
A.B., Mills College; M.A., Bryn Mawr College; Ph.D., University of Wisconsin.

HAVER, CLARE L. (Mrs. R.) (1949)------------Instructor in Education
A.B., Western Washington College of Education.

HAYNES, GERALDINE K. (Mrs. L.) (1931)------------Senior Librarian
A.B., Indiana Central College; B.S. in L.S., University of Illinois.

HOUSEMAN, RICHARD A. (1948)------------Associate Professor of Education
B.S., Central Michigan College of Education; M.A., Ed.D., Teachers College Columbia University.

HOUSER, LOWELL (1938)------------Associate Professor of Ar
Diploma, Chicago Art Institute. Five years' special study in Mexico, Yucatan Haiti, and New York City.

HUGHES, DONALD H. (1950)------------Assistant Professor of Education
B.A., Hastings College; M.Ed. and one year of graduate work at the Universit of Colorado.

HUNTER, JAMES J., JR. (1946)------------Executive Dean; Professor of Education
A.B., Cornell University; M.S., Ph.D., Syracuse University.

IMBROCK, PAUL H. (1950)------------Assistant Professor of Educatio
B.S., Bowling Green State University; M.A., Ed.D., Teachers College, Columbi University.

ISENSEE, ROBERT W. (1948)------------Assistant Professor of Chemistr
A.B., Reed College; M.A., Ph.D., Oregon State College.

JACKSON, EVERETT GEE (1930)------------Professor of Ar
A.B., San Diego State College; M.A., University of Southern California. Thre years special study in Mexico.

JACOBSEN, HELEN M. (1946)------------Senior Libraria
A.B., San Diego State College; B.S. in L.S., University of California.

JOHNSON, FRANK LOUIS (1939)------------Associate Professor of Englis
A.B., M.A., University of Minnesota; Ph.D., University of Wisconsin.

JOHNSON, TESSA M. (1950)------------Assistant Professor of Physical Educatio
A.B., University of California; M.S., University of Southern California.

JONES, KENNETH K., JR. (1948)------------Assistant Professor of Speech Art
B.S., Northwestern University; M.A., Stanford University.

JOSEPH, LIONEL (1947)------------Associate Professor of Chemistr
B.S., St. Louis University; M.S., Ph.D., Washington University.

KALBFELL, DAVID C. (1948)------------Assistant Professor of Physic
A.B., University of California at Los Angeles; M.A., Ph.D., University of Cal fornia. Registered Electrical Engineer.

KAPLAN, OSCAR J. (1946) ........ Associate Professor of Psychology
B.A., M.A., University of California at Los Angeles; Ph.D., University of California.

KASCH, FREDERICK W. (1948) ........ Assistant Professor of Physical Education
B.S., M.S., University of Illinois; graduate study at New York University and University of Illinois.

KEENEY, JOSEPH SUMNER (1933) ........ Professor of English
A.B., Yale University; M.A., Ph.D., University of California.

KENNEDY, CHESTER B. (1937) ........ Associate Professor of English
A.B., Chico State College; M.A., Ph.D., Stanford University.

KIDWELL, WILLIAM M. (1949) ........ Placement Officer; Assistant Professor of Psychology
B.A., M.S., University of Oregon; Ed.D., Stanford University.

KITZINGER, ANGELA M. (1945) ........ Associate Professor of Health Education
A.B., Barnard College, Columbia; M.A., Teachers College, Columbia University. Additional work at Central School of Hygiene and Physical Education and at Folk High School, Ollerup, Denmark.

KLAPP, ORRIN E. (1948) ........ Assistant Professor of Sociology
M.A., Ph.D., University of Chicago.

KOESTER, GEORGE A. (1950) ........ Assistant Professor of Education
B.S., Midland College; M.A., University of Colorado. Two years of graduate study at University of Colorado and University of Minnesota.

LAMDEN, CHARLES W. (1946) ........ Dean of Educational Services and Summer Sessions; Professor of Accounting and Business Management
A.B., M.A., University of California at Los Angeles; Ph.D., University of California. Certified Public Accountant.

LAURITSEN, WILLIAM H. (1947) ........ Professor of Health Education
A.B., M.A., University of Nebraska; Ph.D., Ohio State University.

LEBARRON, EVANGELINE O. (Mrs. H. E.) (1946, except 1948-49)
Assistant Professor of Secretarial Management
B.A., B.S., University of Iowa; B.A., Sioux Falls College; one and one-half years graduate study at Claremont Colleges, University of Southern California, University of Minnesota and University of Hawaii.

LEIB, JULIUS (1938) ........ Associate Professor of Music
Three years special study at Leipzig Conservatory.

LEIFFER, DONALD B. (1948) ........ Professor of Political Science
A.B., University of California at Los Angeles; M.A., Ph.D., Harvard University.

LEMME, MAURICE M. (1948) ........ Associate Professor of Mathematics
A.B., Oakland College; M.A., Indiana University; Ph.D., Purdue University.

LEONARD, CHARLES B. (1921) ........ Professor of History
A.B., M.A., Ph.D., University of California.

LESLEY, LEWIS B. (1924) ........ Professor of History
A.B., Stanford University; M.A., Ph.D., University of California.

LINLEY, JAMES M. (1945) ........ Assistant Professor of Education
Ph.B., University of Chicago; M.S., Ph.D., University of Southern California.

LOCKMAN, EVELYN (1948) ........ Assistant Professor of Physical Education
B.A., Vanderbilt University; M.A., George Peabody College; graduate study at New York University, and University of Wisconsin; three years special study in dance.

LUCE, LAWRENCE W. (1949) ........ Assistant Professor of Industrial Arts
B.S., Illinois Wesleyan University; M.S., Stout Institute.

LUCIO, WILLIAM H. (1939) ........ Coordinator of Elementary Education
A.B., M.A., Ph.D., University of California. Professor of Education

MADDEN, RICHARD (1939) ........ Executive Dean; Professor of Education
A.B., Nebraska (Peru) State Teachers College; M.A., Ph.D., Columbia University.

MARCHAND, ERNEST L. (1946) ........ Professor of English
A.B., M.A., University of Washington; Ph.D., University of Wisconsin.

McBLAIR, WILLIAM (1948) ........ Assistant Professor of Zoology
A.B., San Diego State College; two years of graduate work at the University of California.

McCLINTIC, JOSEPH O. (1946) ........ Professor of Economics
A.B., Central College; A.M., University of Missouri; Ph.D., University of Wisconsin.

McCOLLOM, IVAN N. (1946)------Dean of Educational Services and Summer Sessions
Professor of Psychology
A.B., Central Washington College of Education; B.S., M.S., University of Oregon; Ed.D., Colorado State College of Education.

* McGAUGHEY, JANET M. (Mrs. J. R.) (1947)--------Assistant Professor of Music
B.M., M.M., University of Michigan.

McLONEY, WIRT L. (1949)---------------------------Instructor in Physical Science
A.B., Western State College; M.A., Colorado State College of Education.

MENDENHALL, MARY (1939)------------Dean of Women; Professor of Philosophy
B.A., University of Colorado; M.A., University of Southern California; Ph.D., Yale University.

MERRILL, JOHN E. (1946)--------------------------Assistant Professor of History
A.B., Stanford University; A.M., Harvard University. Two years graduate study at Stanford University.

MERZBACHER, CLAUDE FELL (1947)------Assistant Professor of Physical Science
B.S., University of Pennsylvania; M.A., Claremont Graduate School. Licensed Professional Chemical Engineer.

MESSIER, LEONARD N. (1946)----------------------Assistant Professor of French
A.B., San Diego State College; M.A., Ph.D., University of California.

MILLER, DOROTHY A. (1947)-----------------------------Instructor in Chemistry
B.S., A.B., Southeast Missouri State College; M.S., State University of Iowa.

MILNE, DAVID S. (1946)--------------------------Associate Professor of Sociology
A.B., University of California at Los Angeles; M.A., University of Southern California; Ph.D., University of Chicago.

MOE, CHESNEY R. (1931)------------------------------------Professor of Physics
A.B., M.A., Stanford University; Ph.D., University of Southern California. Registered Mechanical Engineer. On military leave, April, 1951.

MOORE, EDWENA B. (Mrs. E. J.) (1947)----------Assistant Professor of Education
A.B., San Diego State College; A.M., Claremont Colleges.

MORGAN, CHARLES (1949)-----------------------------Instructor in Engineering
M.E., Stevens Institute of Technology; M.S., University of California. Registered Professional Mechanical Engineer.

MOSEN, ARTHUR W. (1950)------------------------------Instructor in Chemistry
B.S., and one year graduate study at Oregon State College.

MUCHMORE, DON M. (1950)--------------------------Lecturer in Political Science
A.B., Occidental College; one year graduate study at the University of California at Los Angeles.

MYERS, MABEL A. (1946)----------------------Associate Professor of Bacteriology
A.B., M.A., Pomona College; Ph.D., Cornell University.

* NASATIR, ABRAHAM PHINEAS (1928)---------------------Professor of History
A.B., M.A., Ph.D., University of California.

NICHOLS, AMBROSE R., JR. (1939)------------------------Professor of Chemistry
B.S., University of California; Ph.D., University of Wisconsin.

NIEBAUER, RUBY R. (1949)----------------------Assistant Professor of Education
B.S., M.S., University of Wisconsin.

NORLAND, CALVERT E. (1947)---------------------Assistant Professor of Zoology
A.B., Pomona College; M.S., University of California. Graduate study at Claremont Colleges.

* OLSON, ANDREW C., JR. (1946)------------------Assistant Professor of Biology
A.B., San Diego State College; M.S., University of Idaho.

OSBORN, CLARENCE G. (1937)----------------------Professor of Political Science
A.B., A.M., Ph.D., Stanford University.

PEIFFER, HERBERT C., JR. (1937)------------------------------Dean of Students
Professor of Psychology and Guidance
A.B., University of California at Los Angeles; M.A., Ph.D., Stanford University

PEREZ, ROSE MARIE (1948)-------------------------------------Junior Librarian
A.B., San Diego State College; B.S. in L.S., University of Southern California
M.A., University of Chicago.

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* On leave.

PERRY, FAY V. (Mrs. J. M.) (1936) -------- Coordinator of Guidance for Provisional Students; Professor of Sociology
A.B., San Diego State College; M.A., Ed.D., University of Southern California.

PETERSON, CHARLES E. (1921) ------ Dean of Men; Professor of Physical Education
A.B., San Diego State College; M.A., Claremont Colleges.

PFAFF, PAUL LEWIS (1931) ------------------ Associate Professor of Speech Arts
A.B., Stanford University; M.A. and two years graduate study at the University of Southern California.

PHELPS, LOIS HIGGS (Mrs. P.) (1950) -------------------------- Junior Librarian
A.B., San Jose State College.

PHILLIPS, GEORGE L. (1947) --------------------- Assistant Professor of English
A.B., Dartmouth College; M.A., Harvard University; Ph.D., Boston University.

PHILLIPS, KENNETH (1950) ---------------- Associate Professor of Industrial Arts
B.S., State College for Teachers (Buffalo); M.A., Ph.D., Ohio State University.

PHILLIPS, WALTER THOMAS (1927) ---------------------- Professor of Spanish
A.B., University of Washington; M.A., Stanford University; Ph.D., University of Southern California.

POST, LAUREN CHESTER (1937) ------------------------- Professor of Geography
A.B., M.A., Ph.D., University of California.

POVENMIRE, E. KINGSLEY (1946) ------------ Associate Professor of Speech Arts
B.S., Ohio State University; M.F.A., Yale University.

PRESTON, DUDLEY A. (1948) ---------------------- Assistant Professor of Botany
B.S., Washington State College; M.S., Ph.D., University of Minnesota.

PROUTY, HELEN L. (1950) ---------------------- Assistant Professor of Education
B.S., University of Nebraska; M.A., Ph.D., University of California.

RABE, WILLIAM F. (1950) ---------------------- Assistant Professor of Marketing
B.S., M.A., University of Nebraska; Ed.D., Stanford University.

RAGEN, KATHERINE M. (1947) -------------------- Associate Professor of History
A.B., Penn College; M.A., Bryn Mawr College; Ph.D., University of Wisconsin.

RHUE, SARA A. (1950) --------------------------- Assistant Professor of Education
A.B., Arizona State College; M.A., Ph.D., State University of Iowa.

RICHARDSON, M. BRUCE (1948) -------------- Associate Professor of Engineering
A.B., Aeronautical Engineer, Stanford University. Registered Mechanical Engineer.

RICHARDSON, ROBERT W. (1939, except 1942-48) --------- Professor of Geography
A.B., Ph.D., University of California.

RIDOUT, LIONEL U. (1946, except 1949-50) ------------------ Instructor in History
A.B., San Diego State College; M.A., and two years graduate study at the University of California.

RIGGS, LESTER G. (1950) --------------------- Assistant Professor of Mathematics
B.S., University of Illinois; M.S., Syracuse University; Ph.D., Northwestern University.

ROBERTS, ELLIS E. (1949) -------------------------------- Instructor in Geology
B.S., Michigan College of Mining and Technology; M.S., California Institute of Technology; Ph.D., Stanford University.

ROBINSON, DUDLEY HUGH (1928) ---------------------- Professor of Chemistry
B.S., Louisiana State University; M.S., State University of Iowa; Ph.D., University of Southern California. Registered Chemical Engineer.

* ROBINSON, EVELYN L. (1946) ---------- Assistant Professor of Physical Education
B.S., Mary Washington College of the University of Virginia; M.S., University of Southern California.

ROGERS, SPENCER LEE (1930) --------------------- Professor of Anthropology
A.B., San Diego State College; M.A., Claremont Colleges; Ph.D., University of Southern California.

ROHFLEISCH, KRAMER J. (1947) ------------------------- Professor of History
A.B., M.A., Ph.D., University of California.

ROWE, ROBERT D. (1946) -------------------------------- Professor of Chemistry
A.B., Ph.D., Stanford University.

RUJA, HARRY (1947) ------------ Assistant Professor of Philosophy and Psychology
A.B., University of California at Los Angeles; M.A., University of Chicago; Ph.D., Princeton University; one year postdoctoral study at the University of California at Los Angeles.

---

* On leave.

RUOCCO, ILSE H. (Mrs. L.)----------------------------Associate Professor of Art
B.E., University of California at Los Angeles; M.A., Columbia University.

RYAN, FREDERICK L. (1946)----------------------------Professor of Economics
B.S., Tufts College; Ph.D., University of California.

SAMPLES, HOWELL GORDON, JR. (1950)-----------------------Junior Librarian
A.B., University of Georgia; B.S. in L.S., George Peabody College for Teachers.

SCHALLES, FRANCES IRENE (1950)---------------------------Junior Librarian
A.B., San Diego State College. One year graduate study.

SCHEVILL, KARL E. (1949)--------------------------------Instructor in Spanish
A.B., Harvard University; M.A., Ph.D., University of California.

SCHRUPP, MANFRED H. (1948)-----------------Assistant Professor of Education
B.S., M.Ed., Ph.D., University of Minnesota.

SCHUNERT, JIM R. (1948)-------------------Coordinator of Secondary Education;
Associate Professor of Education
B.S., M.A., Ph.D., University of Minnesota.

* SCHUTTE, WILLIAM H. (1947)---------Assistant Professor of Physical Education
B.S., University of Idaho; M.S., University of Southern California.

SCHWOB, MARION L. (Mrs. W. E.) (1934)-Associate Professor of Physical Education
B.A., State University of Iowa; M.S., University of Southern California.

SCOTT, FRANK L. (1947)----------------Assistant Professor of Physical Education
A.B., Grinnell College; M.A., University of Michigan; one year additional study at the University of Michigan.

SELLMAN, HUNTON D. (1946)--------------------------Professor of Speech Arts
B.S., Purdue University; M.S., University of Arizona. Three and one-half years graduate study at University of California, University of North Carolina and Yale University.

SHANNON, FLORENCE S. (Mrs. E. L.) (1933)
Assistant Professor of Physical Education
A.B., University of California; M.A., University of Southern California.

SHEAFFER, HELEN M. (1950)----------------------------Instructor in Education
A.B., M.A., Colorado State College of Education.

SHELAR, EUGENE (1949)-------------------------Assistant Professor of Zoology
B.S., State Teachers College at Slippery Rock, Pennsylvania; M.S., Ph.D., Cornell University.

SHIELDS, ALLEN E. (1949)--------------------Assistant Professor of Philosophy
A.B., University of California; M.A., Ph.D., University of Southern California

SHIELDS, KARENA P. (1948)---------------------Assistant Professor of English
A.B., and one year of graduate study at the University of Southern California

SHIRLEY, DAVID E. (1950)------------------------------Instructor in Economics
A.B., Princeton University; M.A., University of Utah; two years graduate study at Stanford University.

SHOUSE, CLAUDE F. (1946)----------------------Assistant Professor of English
A.B., Georgetown College; M.A., University of Kentucky; one and one-half years graduate study at University of Pittsburgh and University of Southern California.

SHUTTS, WILLIAM H. (1949)-----------------Assistant Professor of Engineering
B.S., M.S., University of Colorado.

SILVERNAIL, CHESTER J. (1949)---------------Assistant Professor of Astronomy
A.B., San Diego State College; M.A., Claremont Graduate School.

SMART, KEITH L. (1949)------------------------------Instructor in Bacteriology
A.B., M.A., University of California.

SMITH, CHARLES ROBERTS (1933)-----Assistant Professor of Physical Education
A.B., San Diego State College; M.S., University of Southern California.

SMITH, CLIFFORD EDWARD (1937)---------------------Professor of Astronomy
A.B., Carleton College; M.A., Swarthmore College; Ph.D., University of California.

SMITH, DEANE FRANKLIN (1939)------------------Associate Professor of Music
B.M., M.M., Northwestern University.

SMITH, LOUIS E., JR. (1946)---------------------Associate Professor of Physics
A.B., San Diego State College; Ph.D., University of Washington.

---

* On leave Semester II

SORENSON, GEORGE N. (1946)---------Associate Professor of Art
A.B., San Diego State College; M.A., University of Southern California; graduate study at University of California and University of Minnesota.

SPANGLER, JOHN A. (1946)---------Associate Professor of Chemistry
A.B., Ph.D., West Virginia University.

SPORTSMAN, CHARLES C. (1947)---------Associate Professor of Physical Education
B.S., North Texas State College; M.S., and one year additional study at the University of Southern California.

SPRINGSTON, CHRISTINE (1930)---------Associate Professor of Music
B.A., B.M., University of Redlands; M.A., University of Washington. Diplomée d'execution, Conservatoire Americain, Fontainebleau, France.

STEINMETZ, HARRY V. (1930)---------Associate Professor of Psychology
A.B., University of California; M.A., University of Southern California; Ph.D., Purdue University.

STONE, HAMILTON L. (1947)---------Assistant Professor of Engineering
B.S., U. S. Naval Academy. Two and one-half years of graduate study. Registered Mechanical Engineer.

STONE, JOHN PAUL (1930)---------Head Librarian; Professor of Library Science
B.S., Northwest Missouri State Teachers College; B.S., M.S., University of Illinois; Ph.D., University of Chicago.

STORM, ALVENA (Mrs. Eugene) (1926)---------Associate Professor of Geography
A.B., M.A., University of California.

STOUGH, MORROW F. (1950)---------Assistant Professor of Education
A.B., Wittenberg College; M.A., University of Pennsylvania; Ph.D., University of California.

STOVALL, HARRIET B. (Mrs. S. L.) (1925)---------Senior Librarian
Graduate, Berkshire Athenaeum, Massachusetts.

STRAUB, LURA LYNN (1948)---------Assistant Professor of Secretarial Management
A.B., Jamestown College; M.C.S., Indiana University; graduate study at University of Wyoming and University of Denver.

SUTTON, JOSEPHINE M. (1947)---------Junior Librarian
A.B., University of Oklahoma.

SWIGGETT, JEAN D. (1946)---------Associate Professor of Art
A.B., San Diego State College; M.F.A., University of Southern California; graduate study at Claremont Colleges.

TALBOY, RUTH A. (1947)---------Assistant Professor of Home Economics
B.S., Iowa State College; M.A., Stanford University; one year of graduate study at Universities of Minnesota, Iowa, and California.

TAYLOR, JAMES W. (1950)---------Instructor in Geography
A.B., Northwestern State College; M.A., Louisiana State University.

TAYLOR, KENNETH M. (1949)---------Assistant Professor of Zoology
A.B., M.A., Ph.D., University of California.

TAYLOR, MERREL A. (1946)---------Assistant Professor of Zoology
A.B., Indiana University; B.S., M.S., University of Michigan.

TERHUNE, JOHN A. (1946)---------Lecturer in Physics
B.S., U. S. Naval Academy; M.S., Harvard University.

TERRY, WILLIAM L. (1946)---------Lecturer in Physical Education
A.B., Western Kentucky Teachers College; M.S., Indiana University; two years of additional study at University of Kentucky, University of Illinois, and Columbia University.

THEOBALD, JOHN R. (1946)---------Professor of English
B.A., St. Catherine's College, Oxford University; M.A., Mansfield College, Oxford University; Ph.D., University of Iowa.

TIDWELL, JAMES N. (1947)---------Professor of English
A.B., Simmons University; M.A., University of Oklahoma; Ph.D., Ohio State University.

TOLLEFSEN, DOROTHY J. (1946)---------Assistant Professor of Physical Education
A.B., M.A., University of California.

TORBERT, FRANCES B. (Mrs. H.) (1937)---------Associate Professor of Marketing
A.B., Stanford University; M.A., University of Southern California; one year graduate study at Stanford University.

TRAIL, MABEL COY (1935)----------------------------------Professor of English
A.B., Parsons College; M.A., State University of Iowa; Ph.D., University of Southern California.

TREAT, WOLCOTT C. (1950)--------------------Assistant Professor of Psychology
A.B., Harvard College; A.M., Harvard University; Ph.D., Stanford University

TUCKER, GORDON H. (1945)---------------------------------Professor of Zoology
B.S., M.S., University of South Carolina; Ph.D., University of North Carolina.

TURNER, MERLE B. (1950)---------------------Assistant Professor of Psychology
A.B., Willamette University; M.A., Stanford University; Ph.D., University of Colorado.

VAN CLEAVE, MAURICE (1948)---------------------------Lecturer in Accounting
B.S., U. S. Naval Academy; one year graduate study at U. S. Naval War College Public Accountant.

VAN ROEKEL, BYRON H. (1950)------------------Assistant Professor of Education
A.B., Central College; M.A., Ph.D., University of Iowa

VOEKS, VIRGINIA W. (1949)--------------------Assistant Professor of Psychology
B.S., M.S., University of Washington; Ph.D., Yale University.

WALBA, HAROLD (1949)----------------------------------Instructor in Chemistry
B.S., Massachusetts State College; Ph.D., University of California.

WALKER, DONALD E. (1949)--------------------------------Instructor in Sociology
A.B., M.Th., University of Southern California; two years graduate study at Stanford University.

WALKER, HILDE KRAMER (Mrs.) (1931)----------Assistant Professor of German
A.B., M.A., Northwestern University.

WALLING, CURTIS R. (1931)--------------------Associate Professor of Engineering
A.B., E.E., Stanford University; one and one-half years of graduate study a Stanford University and the University of Southern California. Registered Electrical Engineer.

WAND, BARBARA A. (1950)---------------------------------------Instructor in Ar
A.B., San Diego State College; graduate study at University of California at Los Angeles.

WATENPAUGH, FRANK M. (1935)---------------Associate Professor of Accounting
A.B., Pomona College; M.A., University of Southern California. Two years graduate study at University of Southern California and University of Oregon. Public Accountant.

WATSON, DONALD R. (1939)-----Dean of Instruction; Professor of Physical Science
A.B., B.S., A.M., Ed.D., University of Southern California.

WEBB, CHARLES R., JR. (1949)----------------------Assistant Professor of History
A.B., M.A., University of California; M.A., Ph.D., Harvard University.

WEST, EDNA A. (1948)---------------Assistant Professor of Secretarial Managemen
B.A., Santa Barbara State College; M.A., and graduate study at Claremon Colleges, Columbia University, and Oregon State College.

WHITE, ALFRED E. (1946)----------Admissions Officer; Coordinator of Educationa Research; Associate Professor of Guidance
A.B., M.A., University of California; Ed.D., Stanford University.

WILCOX, ROBERT F. (1950)----------------Assistant Professor of Political Science
A.B., M.A., Stanford University; M.A., Columbia University; Ph.D., Stanford University.

WIMER, ARTHUR C. (1950)----------------------------------Lecturer in Journalism
B.Lit., Columbia University; M.A., University of Iowa.

WOLF, ERNEST M. (1947)---------------Assistant Professor of German and Spanish
Study at the Universities of Berlin, Paris, Muenster, Cambridge and Bonn. Ph.D. University of Bonn.

WRIGHT, WILLIAM H. (1921)----Professor of Accounting and Business Managemen
B.S., M.A., University of California; Ph.D., University of Southern California Public Accountant.

ZIEGENFUSS, GEORGE (1948)------------Assistant Professor of Physical Education
B.A., University of Washington; M.A., Ed.D., Teachers College, Columbia University.

## ASSISTANT INSTRUCTORS

| | |
|---|---|
| BARHAM, ERIC G., JR.<br>A.B., San Diego State College. | Assistant in Zoology |
| BURKHARDT, FREDERIC S.<br>A.B., Dartmouth College. | Assistant in Education |
| BYRNE, CHARLES T.<br>A.B., San Diego State College. | Assistant in Journalism |
| CULVER, HAROLD W.<br>B.S., University of Alaska. | Assistant in Education |
| HARVEY, HARRY T.<br>A.B., San Diego State College. | Assistant in Zoology |
| HAYDEN, BERNARR F.<br>A.B., San Diego State College. | Assistant in Education |
| HENNE, EARL A.<br>A.B., Colorado College. | Assistant in Education |
| KING, ROBERT E.<br>A.B., San Diego State College. | Assistant in Psychology |
| OSTRAND, GUNNAR<br>A.B., San Diego State College. | Assistant in Education |
| SHREWSBURY, MARVIN M.<br>M.A., University of California. | Assistant in Zoology |
| TISDALE, WILLIAM K.<br>A.B., San Diego State College. | Assistant in Bacteriology |
| WILTON, JOHN W.<br>A.B., San Diego State College. | Assistant in Zoology |
| WYLLIE, JOHN G.<br>A.B., San Diego State College. | Assistant in Chemistry |

## LECTURERS

| | |
|---|---|
| BACK, GILBERT (1950)<br>Professional musician. | Lecturer in Music |
| BLAKE, DEAN (1927)<br>Meteorologist, U. S. Weather Bureau. | Lecturer in Meteorology |
| BURGERT, ROBERT H. (1948)<br>San Diego City Schools. | Lecturer in Education |
| DE JULIEN, LORENZ F. (1949)<br>Self employed. | Lecturer in Marketing |
| GELCHER, JOSEPH (1946)<br>Insurance underwriter. | Lecturer in Insurance |
| GOODWIN, JOHN H. (1947)<br>Insurance broker. | Lecturer in Insurance |
| GRECO, ANTHONY (1950)<br>Self employed. | Lecturer in Physical Education |
| HARBERT, SELMA C. (1950)<br>M.A., Stanford University. | Lecturer in Speech Arts |
| HOSS, WENDELL (1950)<br>Professional musician. | Lecturer in Music |
| HOWARD, FRANCIS J. (1950)<br>Scripps Institution of Oceanography. | Lecturer in Physics |
| HUFF, GEORGE D., M.D. (1939)<br>Practicing physician. | Lecturer in Health and Hygiene |
| KARPINSKI, CHARLES E. (1949)<br>Attorney at Law. | Lecturer in Commercial Law |
| KRUSE, PAUL J. (1949)<br>Ph.D., Columbia University. | Lecturer in Education |
| LINDSLEY, BYRON F. (1947)<br>Attorney at Law. | Lecturer in Commercial Law |

LLOYD, STANLEY J., M.D. (1950)----------Lecturer in Bacteriology
Practicing physician.

McLEES, BERTRAM (1946)----------Lecturer in Commercial Law
Deputy District Attorney.

MULLENIX, CARLOS W. (1950)----------Lecturer in Musi
Professional musician.

SARKISIAN, SARKIS S., M.D. (1949)----------Lecturer in Bacteriolog
Practicing physician.

SLOBIN, HERMON L. (1949)----------Lecturer in Mathematic
Ph.D., Clark University. Deceased February, 1951.

STANIFORTH, ROBERT O. (1948)----------Lecturer in Commercial Law
Swing & Scharnikow, Attorneys.

STEINBERG, WILLIAM (1949)----------Lecturer in Educatio
San Diego City Schools.

SYLVESTER, HELEN K.----------Lecturer in Educatio
Principal, Euclid School. A.B., San Diego State College.

TROGE, RALPH F.----------Lecturer in Educatio
Principal, Woodrow Wilson Junior High School. Ed.D., University of Oregon.

WESSEL, MARK (1950)----------Lecturer in Musi
Professional musician.

WILSON, JAMES F. (1951)----------Lecturer in Educatio
San Diego City Schools.

## RETIRED FACULTY

(Date following name indicates date of retirement)

HARDY, EDWARD L. (1935)----------President Emeritu
AULT, JESSE W. (1948)----------Dean of Education; Professor of Educatio
BELL, GERTRUDE S. (1938)----------Professor of Psycholog
HAMMACK, EDITH CHASTAIN (1950)----------Associate Professor of Educatio
JOHNSON, MYRTLE (1946)----------Professor of Biolog
KELLEY, GENEVIEVE (1949)----------Senior Libraria
LIVINGSTON, GEORGE R. (1949)----------Professor of Mathematic
MOLITOR, VINNIE CLARK (1938)----------Associate Professor of Geograph
SKILLING, W. T. (1936)----------Professor of Astronom
SMITH, LEILA DEBORAH (1948)----------Professor of Musi
TANNER, JESSIE R. (1936)----------Associate Professor of Physical Educatio

## MEDICAL STAFF*

HAROLD G. CARTER, M.D.----------Physicia
CARL H. ENGLER, M.D. †----------Physicia
O. S. HARBAUGH, M.D.----------Physicia
ROBERT B. PAPPENFORT, M.D.----------Physicia
JAMES R. PHALEN, M.D.----------Physicia
ERNEST W. SHAW, M.D.----------Physicia
FRANCES M. WHITE, M.D.----------Physicia
MARILYNN M. FENWICK, P.H.N.----------Nur

---

* All physicians serving part-time.
† On leave.

## ADMINISTRATIVE OFFICE STAFF

KATHLEEN B. ANDERSON----------Secretary, Social Sciences Divisi
LETHA BALDWIN----------Intermediate Stenographer-Clerk, Librar
JANE C. BORDNER----------Secretary, Supervisor of Buildings and Groun
DEON BROKAW----------Secretary, Extension Servic
ANNE T. BROWN----------Evaluations Secreta
NATALIE R. CAMERLYNCK----------Junior Typist-Clerk, Registrar's Offi
EVADNE DEARDORF----------Assistant Registra
SUE W. DYCK----------Mimeograph Offi
GERTRUDE K. DICKINSON----------Bookkeeper, Grade 2, Business Offi
HOPE S. FIRESTONE, B.S.----------Secretary, Evaluations for Teaching Credentia
ANNIE FONG----------Secretary, Health, Physical Education and Recreation Divisi

BERKELEY FREEMAN----Assistant Secretary, Personnel Services
GENEVIEVE M. HAMBLEN----Secretary, Personnel Services
ELIZABETH M. HARRISON----Book Repair Clerk, Library
LOUELLA P. HECK----Secretary, Music Department
CECELIA HERZOG----Clerical Assistant, Women's Physical Education Department
GEORGIA HOCHSTETLER----Secretary, Campus Laboratory School
DOROTHY W. HOEFER, A.B.----Secretary to Dean of Students
PERSIS HURLBUT----Secretary, Audio-Visual Services
IRENE JANECK, A.B.----Secretary, Physical Sciences Division
CONSTANCE KING, B.S.----Secretary to Dean of Women
FAY LANDWEER----Secretary to Dean of Educational Services and Summer Sessions
MILDRED H. LeCOMPTE----Secretary to Librarian
DOROTHY LIVENGOOD----Secretary, Life Sciences Division
MARJORIE L. LUTZ----Secretary, Education Division
JOAN M. MARINER----Junior Typist-Clerk, Library
JEANNE McCOMMINS----Assistant Secretary, Placement Office
JEAN McGHEE, B.S.----Secretary, Teacher Placement
WINNIFRED MIDDLETON----Junior Account Clerk, Business Office
MIRIAM E. MOORE, A.B.----Secretary to Dean of Instruction
HESTER NEWMAN----Secretary, Part-time Employment
DONALD G. PARKER----Accounting Officer, Grade 2, Business Office
MARION L. PARKER, M.A.----Statistician
MARY B. PEEL----Secretary, Education Division
HELEN M. PERRY----Receptionist, Registrar's Office
EDITH E. PETERSON----Junior Typist-Clerk, Library
KATHERINE PYLE, A.B.----Secretary, Veterans Office
JUNE V. ROBERTS, A.B.----Intermediate Stenographer-Clerk, Business Office
GRACE ROGERS----Junior Account Clerk, Business Office
FLORENCE B. SCHNEIDER----Telephone Operator
GRACE J. SFICOS, A.B.----Recorder
ORLETHA J. SLOBE----Intermediate Stenographer-Clerk, Registrar's Office
DOROTHY P. SLOUGH----Placement Secretary
EVELYN J. STEEL----Secretary to Executive Dean
JUANITA L. STEPHENSON----Admissions Secretary
EMMA M. STRUTHERS----Secretary to President
TUNIS F. TUCKER----Intermediate Stock Clerk, Business Office
BETTY L. ULICS----Intermediate Typist-Clerk, Business Office
MARJORIE WELCOME, A.B.----Mimeograph Office
LOLA M. WENGER, A.B.----Secretary, Education Division
FLORENCE E. WIGGINS----Secretary to Dean of Men
CAROLYN V. WILLIAMS----Intermediate Stenographer-Clerk, Business Office
DORIS WILTON----Intermediate Stenographer-Clerk, Business Office
ELEANOR C. WINKLEY----Junior Typist-Clerk, Library
RACHEL E. WRIGHT----Secretary, Art Department

## MAINTENANCE STAFF

CAREY D. FOLGER----Supervisor of Buildings and Grounds
TIMOTHY HALLAHAN, A.B. (Military leave since April 1951) Supervisor of Buildings and Grounds
WILLIAM DUNS----Head Gardener
FLOYD A. KIRKPATRICK----Head Custodian
MYRLEN SOUTHWORTH----Engineer

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## CHAIRMEN OF DIVISIONS

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|---|---|
| AIR SCIENCE AND TACTICS | Lt. Col. Charles E. Mosse |
| BUSINESS | William H. Wright |
| EDUCATION | Fred F. Harcleroad, Jr. |
| FINE ARTS | George N. Sorenson |
| HEALTH, PHYSICAL EDUCATION AND RECREATION | William L. Terry |
| LANGUAGES AND LITERATURE | John R. Adams |
| LIFE SCIENCES | Robert D. Harwood |
| PHYSICAL SCIENCES | Dudley H. Robinson |
| SOCIAL SCIENCES | Clarence G. Osborn |

## CHAIRMEN OF DEPARTMENTS

| | |
|---|---|
| ACCOUNTING AND BUSINESS MANAGEMENT | Eugene P. Brown |
| AIR SCIENCE AND TACTICS | Lt. Col. Charles E. Mosse |
| ART | Everett Gee Jackson |
| ASTRONOMY, GEOLOGY, AND PHYSICAL SCIENCE | Baylor Brooks |
| BOTANY-BACTERIOLOGY | Mabel A. Myers |
| BUSINESS EDUCATION, SECRETARIAL AND OFFICE MANAGEMENT | E. Dana Gibson |
| CHEMISTRY | Robert D. Rowe |
| ECONOMICS | Frederick L. Ryan |
| EDUCATION | Fred F. Harcleroad, Jr. |
| ENGINEERING | Curtis R. Walling |
| ENGLISH | Sidney L. Gulick, Jr. |
| FOREIGN LANGUAGE | Leonard N. Messier |
| GEOGRAPHY | Robert W. Richardson |
| HEALTH | William H. Lauritsen |
| HISTORY | Kramer J. Rohfleisch |
| HOME ECONOMICS | Ruth A. Talboy |
| INDUSTRIAL ARTS | Kenneth Phillips |
| JOURNALISM | Arthur C. Wimer |
| LIBRARY SCIENCE | John Paul Stone |
| MARKETING | Frances B. Torbert |
| MATHEMATICS | Maurice M. Lemme |
| MUSIC | Pattee E. Evenson |
| PHYSICS | Louis E. Smith |
| PHYSICAL EDUCATION, MEN | William L. Terry |
| PHYSICAL EDUCATION, WOMEN | Marion L. Schwob |
| POLITICAL SCIENCE | Don B. Leiffer |
| PSYCHOLOGY AND PHILOSOPHY | Oscar J. Kaplan |
| RECREATION | Frank L. Scott |
| SOCIOLOGY AND ANTHROPOLOGY | Spencer L. Rogers |
| SPEECH ARTS | Paul L. Pfaff |
| ZOOLOGY | Gordon H. Tucker |

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1952/53

# SAN DIEGO STATE COLLEGE

## BULLETIN

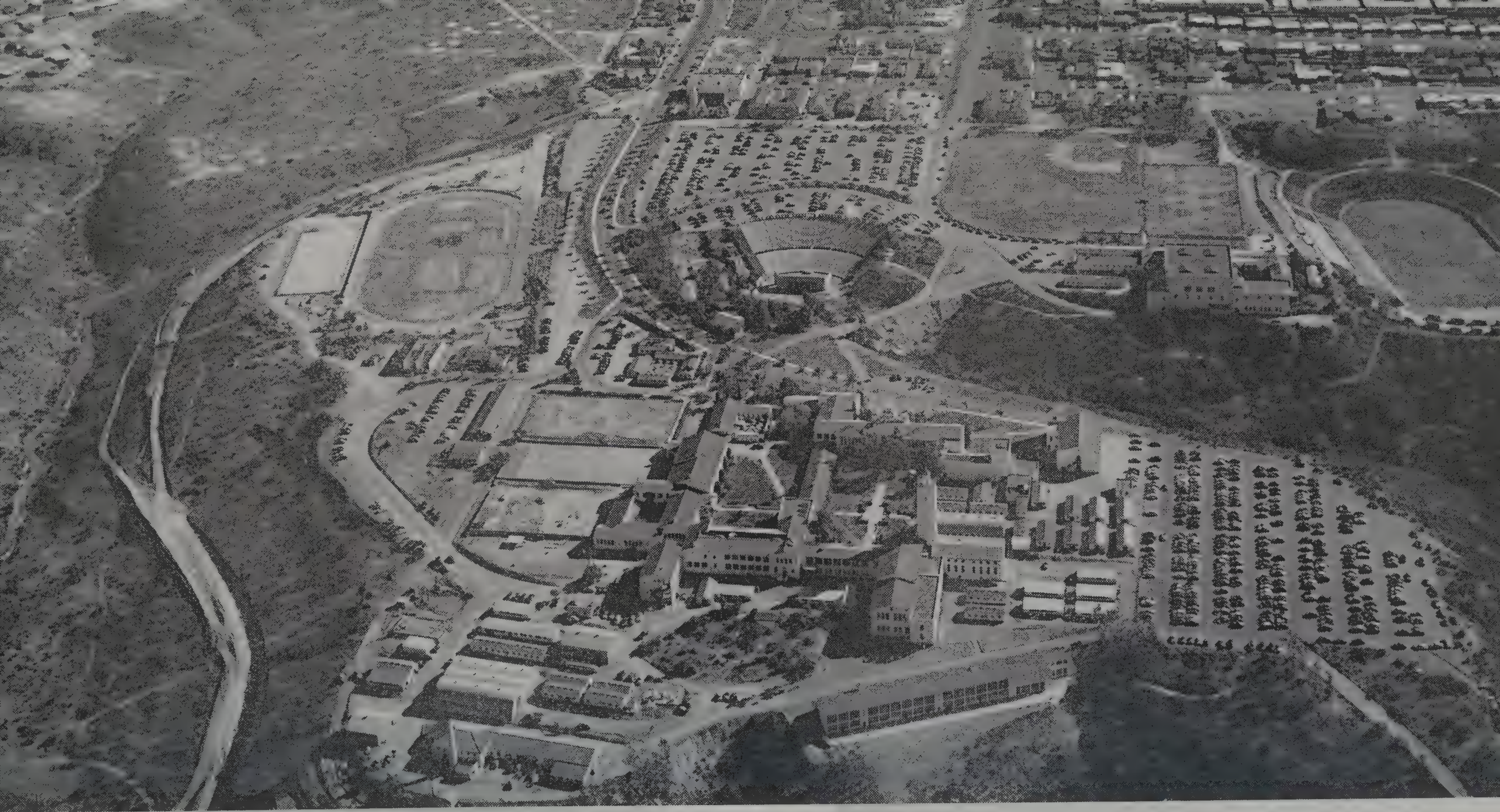
## AND

## ANNOUNCEMENT OF COURSES

SEAL OF THE STATE OF CALIFORNIA

FOR THE YEAR 1952-1953

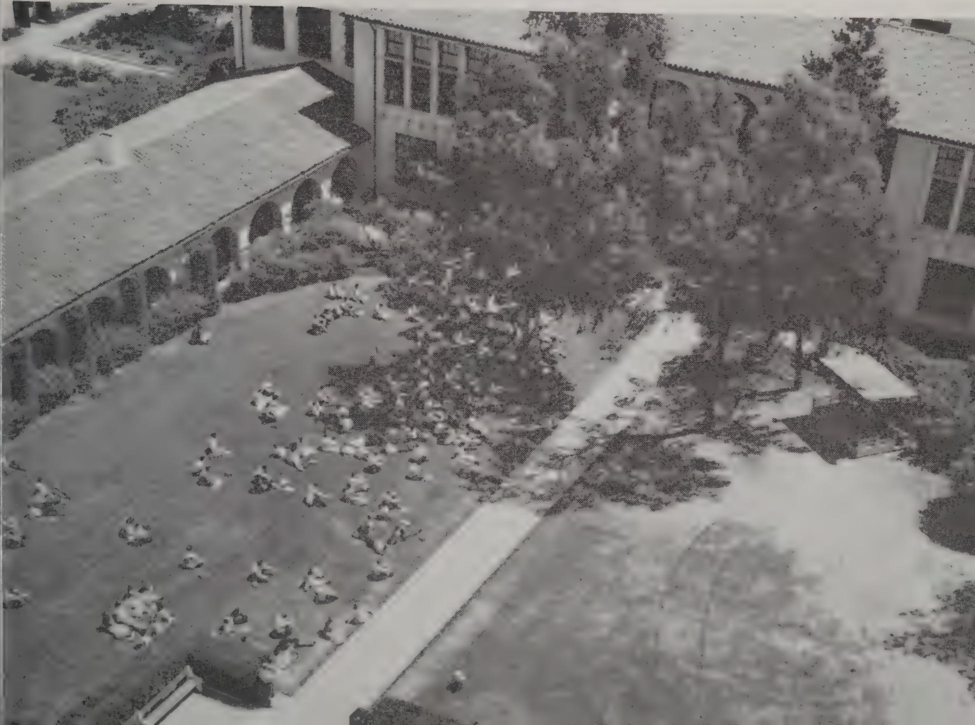
Administration Building



Aerial view of San Diego State College Campus. Six additional buildings have been authorized or are under construction.

▲ ACTEC Gymnasium

Main Quad ▼



▲ Campus Elementary School

Training Includes the ARTS ▼

# BULLETIN

AND

# Announcement of Courses

VOLUME 39

JUNE, 1952

SAN DIEGO STATE COLLEGE
SAN DIEGO, CALIFORNIA

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# 1952

## JULY

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## SEPTEMBER

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## OCTOBER

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## NOVEMBER

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# 1953

## JANUARY

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## FEBRUARY

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## MARCH

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## APRIL

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## MAY

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## JUNE

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## JULY

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## AUGUST

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## SEPTEMBER

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## OCTOBER

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## NOVEMBER

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## DECEMBER

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# CALENDAR 1952-1953

## SUMMER SESSIONS, 1952

Term I (6 weeks) June 23–August 1
Term II (3 weeks) August 4–August 22

## FALL SEMESTER, 1952-1953

| | |
|---|---|
| July 19 | Qualifying examinations for all entering students (8.15 a.m.) |
| August 1 | Applications for admission must be filed on or before this date. |
| August 25 | Qualifying examinations for all entering students (8.15 a.m.) |
| September 10 | Fundamentals test and General Culture test for Teacher Education. (Fundamentals test, 8.30 a.m. to 12 m.) (General Culture test, 1 p.m. to 4.30 p.m.) |
| September 10, 11, 12, 15 | Orientation program. Attendance required of all new students. |
| September 16-17 | Registration and payment of fees. |
| September 18 | Instruction begins. Late registration fee becomes effective. (For evening program, see Extended Day and Extension Class Bulletin). |
| September 30 | Applications for admission to Teacher Education, Little Theatre, 11 a.m. |
| October 2 | Last date for late registration. Last date to apply for refunds. |
| October 2-3 | File registration books. Late filing fee effective October 4. |
| October 3 | Last date for filing applications for mid-year graduation. |
| October 8 | Last date for late filing of registration books. |
| October 24 | End of first six-week period. Deficiency notices due. |
| November 7 | Last date for withdrawal from classes. |
| November 11 | Armistice Day—holiday. |
| November 27-29 | Thanksgiving recess. |
| December 5 | End of second six-week period. Deficiency notices due. |
| December 8 | File applications for June graduation. |
| December 12 | Last day before Christmas recess begins. |
| December 15-January 2 | Christmas vacation. |
| January 5 | Classes resume. |
| January 29-February 5 | Semester examinations. |
| February 5 | Fall semester ends. |

## SPRING SEMESTER, 1952-1953

| | |
|---|---|
| January 2 | Applications for admission must be filed on or before this date. |
| January 10 | Qualifying examinations for all entering students (8.15 a.m.) |
| February 9 | Fundamentals test and General Culture test for Teacher Education. (Fundamentals test, 8.30 a.m. to 12 m.) (General Culture test, 1 p.m. to 4.30 p.m.) |
| February 10-11 | Orientation program. Attendance required of all new students. |
| February 12 | Lincoln's birthday—holiday. |
| February 13, 16 | Registration and payment of fees. |
| February 17 | Instruction begins. Late registration fee becomes effective. (For evening program, see Extended Day and Extension Class Bulletin). |
| February 23 | Holiday for Washington's birthday. |
| February 24 | Applications for admission to Teacher Education, Little Theatre, 11 a.m. |
| March 3 | Last date for late registration. Last date to apply for refunds. |
| March 4-5 | File registration books. Late filing fee effective March 6. |
| March 6 | Last date for filing applications for June or summer graduation. |
| March 9 | Last date for late filing of registration books. |
| March 27 | End of first six-week period. Deficiency notices due. |

| | |
|---|---|
| March 27 | Last day before Spring recess begins. |
| March 30-April 3 | Spring recess. |
| April 6 | Classes resume. |
| April 17 | Last date for withdrawal from classes. |
| May 15 | End of second six-week period. Deficiency notices due. |
| May 30 | Memorial Day—holiday. |
| June 11-18 | Semester examinations. |
| June 18 | Spring semester ends. |
| June 19 | Commencement. |

## SUMMER SESSIONS, 1953

| | | |
|---|---|---|
| Term I | (6 weeks) | June 29–August 7 |
| Term II | (3 weeks) | August 10–August 28 |

# FEES AND EXPENSES

## PROBABLE EXPENSES FOR ONE SEMESTER

An estimate of the expense of attendance for one semester is given below. No estimate is made as to the cost of clothing, or other personal items, since these figures vary with the demands of the individual.

### A Partial Estimate of Expenses
One Semester

| | *Minimum* | *Maximum* |
|---|---|---|
| Fees | $24.00 | $31.50 |
| Books | 18.00 | 30.00 |
| Board and room | 275.00 | ---- |
| Transportation, lunches, incidentals | 20.00 | 60.00 |
| Miscellaneous | 5.00 | |

Before enrolling in college, the student should possess sufficient resources to meet the minimum expenses for one semester. A limited amount of clerical work in offices and in the library may be offered from time to time but ordinarily it is not sufficiently remunerative to reduce expenses materially.

### Enrollment Fees Payable at Time of Registration

Regular students (carrying more than 6 units):

Auditors pay same fees as students carrying courses for credit.

| | |
|---|---|
| Tuition | $6.50 |
| Materials and service | 7.50 |
| Total | $14.00 |

Limited students (carrying 6 units or less):

Auditors pay same fees as students carrying courses for credit.

| | |
|---|---|
| Tuition (one, two, or three units) | $5.25 |
| Materials and service | 2.25 |
| Total | $7.50 |
| Tuition (four, five, or six units) | $6.50 |
| Materials and service | 7.50 |
| Total | $14.00 |

Student activity fee (not a state fee):

| | |
|---|---|
| Regular students | $10.00 |
| Limited students | 2.00 |
| Associated Students Group Accident Insurance | |
| Men | 3.50 |
| Women | 2.50 |

### Miscellaneous Fees
(Fees payable when service is rendered)

| | |
|---|---|
| Change of program | $1.00 |
| Failure to meet administratively required appointment or time limit | 2.00 |
| Evaluation of records for nonmatriculated students | 2.00 |
| Late registration | 2.00 |
| Transcript of record (first copy free) | 1.00 |
| R. O. T. C. deposit (unexpended portion is refundable) | 10.00 |

### Graduation Fees

| | |
|---|---|
| State teaching credentials (each credential) | $4.00 |
| Diploma | 1.00 |

The credential fee is collected through the college by cashier's check or post office money order made payable to the State Department of Education.

### Summer Session Fees

| | |
|---|---|
| Tuition, each session (Per unit) | $7.50 |
| Activity fee (not a state fee) | 2.00 |

# THE COLLEGE

## FUNCTIONS OF THE STATE COLLEGES

The state colleges have three major functions, namely: (1) To help the individual student to develop a well-rounded and adjusted personality; (2) to promote in all students civic intelligence and competence; and (3) to create supplies of trained men and women to serve as teachers and officials in the elementary and secondary schools, to fill places of leadership in business and industry, and to transfer to graduate institutions to equip themselves to extend the frontiers of knowledge and to occupy the positions of leadership in various professions. In terms of publicly supported higher education, the state colleges and the university together make provision for the realization of all the essential objectives of higher education in our State.

To achieve their unique purposes the state colleges have developed and are improving offerings as follows:

1. Teacher education curricula for those students who plan to teach, supervise, or administer in the elementary school, the junior high school, and in secondary schools.
2. Preprofessional curricula.
3. Four-year curricula in such fields as business, industry, governmental services, homemaking, and social service.
4. General education for students who take work which leads toward the bachelor's degree or to the higher professions through graduate work.
5. Guidance services to assist the individual student to plan his educational program and to make his college and life adjustments.
6. Extension courses in appropriate fields.

The democratic controls exercised over the state colleges make them readily and effectively responsive to individual and community needs and encourage them continuously to make significant improvements in both curriculum and personal services. The state colleges are thus laboratories in which the facts and theories developed in research, in community living, and in daily association with students are reflected in an instructional program designed to provide educational services inherent in the principle of equality of opportunity.

## LOCATION AND ENVIRONMENT

Renowned as a winter resort with a mild but invigorating climate, San Diego has become equally famous for its cool summers. High cultural standards in art, music, literature, and science create a stimulating environment for a college. Many of these advantages are to be found in the heritage resulting from the expositions of 1915-16 and 1935-36, including the buildings themselves, which portray the best types of Spanish colonial art and architecture. Housed in these buildings are the Fine Arts Gallery, exhibits in anthropology, natural history, and American archaeology, which are in many respects unsurpassed. The outdoor organ, the Balboa Bowl, and the horticultural gardens make Balboa Park, in which all these facilities are located, world renowned. The Scripps Institution of Oceanography, operated by the University of California at La Jolla, gives opportunity for important cooperation in the biological sciences.

## BUILDINGS AND EQUIPMENT

On February 1, 1931, the college was moved to the new campus, located one mile north of the city's principal east-west boulevard, El Cajon Boulevard. The buildings are of Spanish-Moorish architecture which is well suited to the landscape and climate of this region. They include the Academic Building (which houses lecture halls, classrooms and administrative offices); the Science Building; the Fine Arts Building; the Library; the Little Theater; the Music Building; the Campus Elementary School; Scripps Cottage (a social clubhouse for women students); the Cafe and Book Store; and the Physical Education Building (a structure with adequate facilities for both men and women). The gymnasium contains a very fine basketball floor with stands that will accommodate 1,500 spectators. A fine concrete stadium, constructed in a natural site, has a seating capacity that is adequate for present needs. The open air theater, seating 4,200 persons, serves as a meeting place for large groups.

## FACILITIES FOR THE EDUCATION OF TEACHERS

The college maintains a modern elementary school on the campus where it has developed an extensive program for the education of elementary school teachers. The classroom-laboratory plan which calls for the use of work-rooms, the library, and shops affords unusual opportunities for the induction of students into teaching. By arrangement with the San Diego city and county schools, directed teaching is provided in the elementary and secondary schools.

## THE FACULTY

The faculty of 203 members has received advanced training in some 124 colleges and universities of the United States or foreign countries. The professional education of the faculty places the college at the 97 percentile position among teacher education institutions in the Nation. For listings and further details, see the Directory.

## THE LIBRARY

The library facilities of this college are noteworthy for an institution of its size. The library consists of over 150,000 volumes and receives more than 900 different periodicals selected to meet the requirements of a modern educational institution. Professionally trained librarians are available to render assistance to students and faculty in their reading and reference work.

The Campus Elementary School Library, representing a collection of 15,000 volumes, possesses equipment and building facilities that are unique.

## ACCREDITATION

San Diego State College is a member of the American Association of Colleges for Teacher Education and the Western College Association.

## LIVING ACCOMMODATIONS

Living arrangements for students whose homes are not in San Diego or within commuting distance are made through the offices of the Dean of Women or the Dean of Men. Women students are urged to live in the residence hall adjoining the campus. Careful consideration is given to study conditions, healthful living, and adequate social opportunities. Room and board may be secured for approximately $275 per semester, payable in four installments. Opportunities to reduce this figure by working a few hours each week are occasionally available. Reservations should be made in advance through the Manager of Quetzal Hall, 5192 College Avenue, San Diego 15, California. Single women students under the age of 21 who find other accommodations more desirable must file with the Dean of Women a statement from the parent or guardian.

## VETERANS' EDUCATION AND HOUSING

The college has been approved by various accrediting agencies to offer courses for veterans leading to the baccalaureate in some 25 major fields and to the master's degree and various teaching credentials. In connection with the Personnel Services Center, a veterans' office is maintained on the campus to facilitate registration, aid in the establishment of benefits, afford special counseling services, and serve as an information center.

Through the City of San Diego, 400 family units formerly under the jurisdiction of the Federal Public Housing Authority have been made available to the college for the housing of its married veterans. These units are located some eight miles from the campus proper at Aztec Terrace, midway between Old Town and Loma Portal. Applications for housing at Aztec Terrace are made through the office of the Dean of Men.

## STUDENT ACTIVITIES

A rich field of extracurricular activities is made possible through the Associated Students. The *Student Handbook*, available at the time of registration, gives information concerning the nature and scope of these opportunities. During the college year of 1951-1952, seven governmental organizations, six service organizations, 31 departmental and honorary organizations, 12 religious organizations, 16 national fraternities, and 11 national sororities were officially recognized on the campus. Full programs of intramural and intercollegiate athletics are likewise maintained. Students are urged to select extracurricular activities carefully in order to receive optimum benefit from group experiences and to maintain continuous records of good scholarship.

## STUDENT HEALTH SERVICE

As a part of the program of Student Personnel Services, the college provides health services for the protection and maintenance of student health. These health services, under the direction of a medical doctor assisted on a part-time basis by several medical specialists, are available to students for consultation, treatment of minor physical difficulties and emergencies, and counsel as to additional proper procedures. Two full-time nurses are on duty, one of whom, a public health nurse, has charge of the health service unit. During the weeks the college is in session students may obtain appointments with specialists who are on duty.

A complete physical examination is required of each student at the time of admission to the college. Careful attention is given to students undergoing private remedial treatment and to those for whom a modification of study load or amount of participation in physical activities seems advisable. A follow-up procedure is in effect for students who have been urged to consult their family physician for correction of defects found in the examination.

Physical examinations are likewise required of and provided for all teacher education students at time of admission to and graduation from the various credential programs. They are also required before students are authorized to participate in the organized program of intramural recreation or in intercollegiate athletics. A college physician is present at all major athletic contests, and on call in case of need for other regularly scheduled events.

A group plan of accident insurance is available through the Associated Students at the time of registration for students who desire such protection.

## PERSONNEL SERVICES CENTER

The college offers the services of a trained staff to students who wish help in the solution of problems which are personal, social, academic, or occupational in nature. It is a program designed to help students gain the greatest possible advantage of their college experience. Agencies and facilities cooperating in the effort to assist students include the student health service, reading and study laboratory, the speech improvement program, mathematics clinic, the placement and occupational guidance service, and a staff of personal counselors. Students who wish to take advantage of these facilities may do so through the Personnel Services Center.

## PLACEMENT OFFICE

The Placement Office provides a central source of information on placement opportunities and vocational trends. The staff assists undergraduates in finding part time employment. Full time employment for graduates or former students is facilitated through contacts with schools, businesses, and industries in this locality.

## SCHOLARSHIPS

A number of scholarships for both men and women has been made available through the efforts of the alumni, civic organizations, student organizations, business and professional groups and individuals, and other friends of the college. Superiority in ability and achievement, strength of character, and worthiness from the point of view of need are the standards upon which selection is based. Scholarship aid is limited for the most part to students who have completed at least one semester at the San Diego State College. Except for athletics grants-in-aid, which are initiated through the Director of Athletics, scholarship applications are made through the office of the Dean of Women.

Unless otherwise stipulated, all scholarship awards are determined and announced by the faculty Committee on Loans and Scholarships in October of the college year. Applications for scholarships for the fall semester must be filed with the office of the Dean of Women prior to October 15th. The scholarships available for 1952-53:

**ALPHA GAMMA DELTA.** This sorority presents a $50 award each year to the student in the sorority with the highest grade point average.

**ALTRUSA CLUB.** Two scholarships of $50 each are made available annually by the Altrusa Club of San Diego. Applications are considered from women students enrolled in San Diego State College who are worthy and in need.

**AMERICAN ASSOCIATION OF UNIVERSITY WOMEN.** One scholarship of $100 is given each year in June to a graduating senior who will begin work in an accredited college or university toward a higher degree or credential. The scholarship is made available by the San Diego Branch of the American Association of University Women. Interviews with representatives of that organization are required.

**AMERICAN ASSOCIATION OF UNIVERSITY WOMEN, INTERNATIONAL RELATIONS SECTION.** This section of the San Diego Association aids an international student attending San Diego State College with awards of from $50 to $100 a year. The student is chosen by the International Relations section with the approval of the Committee on Loans and Scholarships.

**AMERICAN ASSOCIATION OF UNIVERSITY WOMEN, EL CAJON VALLEY BRANCH.** An annual scholarship of $50 is presented to a young woman entering San Diego State College. Selection for the award is made by the club.

**ANONYMOUS (B).** A scholarship of $100 is given each year to be divided among students in financial need, at the discretion of the Committee on Loans and Scholarships. The committee gives consideration to scholastic attainment, financial need, and character.

**ANONYMOUS (E).** A $50 scholarship, awarded each semester through the Committee on Loans and Scholarships, is made available by a public spirited citizen who prefers to assist a student majoring in science.

**ASSOCIATED ARTS OF SAN DIEGO.** A $150 scholarship for a period of two years to a student outstanding in the Speech Arts Department.

**ASSOCIATION OF CHILD EDUCATION.** The Association of Child Education makes available each year a $50 scholarship to a student in the Kindergarten-Primary program. The award is customarily made to an upper division student showing promise in a particular field who is in need financially.

**BARNES CHASE COMPANY BASEBALL SCHOLARSHIP.** Donated by Mr. and Mrs. Norman R. Barnes. Twenty-five dollars a month for 10 months, from September through June. Applicant must be officially enrolled in the college as a regular student in good standing; must maintain a satisfactory scholastic record and be progressing toward an academic objective; must be a member of the freshman or varsity baseball team; and be of sound moral character. The selection of the recipient will be recommended by the baseball coach and approved by the athletic department with the final approval of the Committee on Loans and Scholarships.

**BARNES CHASE COMPANY BASKETBALL SCHOLARSHIP.** (Same as above except for basketball player.)

**BLUE KEY.** Two scholarships of $50 each shall be given annually; one each term. One shall be awarded an entering male freshman student, preferably from San Diego County. The other scholarship will be awarded to a male student in the lower division who has completed at least one semester (12 units) of work at San Diego State College. Selection will be made by the Committee on Loans and Scholarships.

**CABRILLO CIVIC CLUBS.** A scholarship of $250 a year will be awarded a student of Portuguese descent and may be made available in his senior year of high school. The recipient must have good scholastic standing and be in need of financial assistance. An autobiography must accompany the application.

**CAP AND GOWN.** One $50 scholarship is awarded annually to an upper division woman student who has attended San Diego State College for at least one semester and who has maintained at least a "B" average in scholarship for her entire college career. Applications may be secured from the Office of the Dean of Women or the San Diego State College chapter of Cap and Gown.

**CHIANELLI, FRANK.** A $50 scholarship is donated by Sons of Columbus in memory of the founder of this organization in California. The student must be of Italian descent, of good moral character, in need of financial assistance, and have a high scholastic rating.

**CHI OMEGA FRATERNITY** awards annually a $20.00 scholarship to a student outstanding in Sociology Department.

**DANCE CLUB OF SAN DIEGO STATE COLLEGE.** The Dance Club of San Diego State College has established a $50 scholarship to be awarded an outstanding dancer from the club to be used for tuition at a recognized summer school of the dance.

**DAUGHTERS OF THE AMERICAN REVOLUTION.** Two scholarships of $25 each are presented each spring, one to a young man and the other to a young woman outstanding in citizenship and Americanism. Applicants should have at least a "B" average in scholarship, should be able to demonstrate need for financial assistance, and should have junior standing in the college when selected. The selection is made by the faculty Committee on Loans and Scholarships and presentation of awards is made at a luncheon on Flag Day, which is given by the Daughters of the American Revolution.

**DEBATE SCHOLARSHIP.** $50 will be given to a student enrolled at San Diego State College who is outstanding in debate. Selection will be made by the Speech Arts Department with final approval by the Committee on Loans and Scholarships.

**DELTA DELTA DELTA NATIONAL FRATERNITY ALLIANCE.** $100 a year will be given for five years in memory of Georgia Aiman Shattuck. This scholarship is to be awarded to a woman student, in the upper division, who has been admitted to the teacher education curriculum, with a "B" average in all college work, and who is in financial need. Applications should be secured from the Office of the Dean of Women.

**ESCONDIDO BUSINESS AND PROFESSIONAL WOMENS CLUB.** Two $100 scholarships are given anually to two high school graduates who plan to attend San Diego State College. These students are selected by the club on basis of good citizenship, good grades and participation in activities.

**FACULTY DAMES.** Two scholarships of $50 each are given annually to deserving women students selected by the Loans and Scholarships Committee.

**FLEMING, HARVEY, GOLF.** Through a trust fund set aside for awards to exceptional golf players who enroll in college, scholarships of $250 are given. This is a competitive award.

**FOOTHILL BUSINESS AND PROFESSIONAL CLUB.** Two $50 scholarships will be awarded to young women students entering San Diego State College from Grossmont High School.

**FOOTLIGHTS THEATRE, INC.** Annual awards of $50 each are made to members of this Little Theatre group who do outstanding work in dramatic arts.

**FRESHMAN CLASS, 1951-1952.** Two scholarships of $50 each will be awarded in the fall of 1952, one to an entering freshman man and one to an entering freshman woman. The scholarships will be awarded to students who have demonstrated leadership in high school activities. Final selection will be made by the Committee on Loans and Scholarships.

**HALE, E. T., ATHLETIC SCHOLARSHIPS.** $25 a month or more is donated for use of the Athletic Department in scholarships to outstanding athletes.

**JONES, SYBIL ELIZA MEMORIAL.** A scholarship of $100 is awarded annually to a student in drama. Applicant must be officially enrolled in at least his fourth semester in speech and drama with participation in dramatic productions on the campus. He must have at least a "C" average in all college work. Applications are made to the Speech Arts Department for action and awards are made after approval of the faculty Committee on Loans and Scholarships.

**KAPPA ALPHA PSI FRATERNITY—SAN DIEGO ALUMNI.** An annual $50 scholarship ($25 per semester) is awarded a student graduating from high school for fees at San Diego State College. The fraternity makes the selection.

**KAPPA BETA NU.** A $100 scholarship is offered annually to a junior or senior woman student in elementary teacher education. Applicant must be a resident of San Diego County who is in financial need. Final selection rests with a scholarship committee of Kappa Beta Nu.

**KAPPA DELTA PI.** Two $25 scholarships are awarded annually by Kappa Delta Pi of San Diego State College. Selection for awards is made by the group.

**KAY JEWELERS SCHOLARSHIP.** $30 a semester for eight semesters is awarded an entering freshman. This scholarship is to be given alternating years to men and women students. In the fall semester, 1952, the scholarship will be awarded to a young man. Selection is made by the Committee on Loans and Scholarships from applications received from high school students.

**KNIGHTS TEMPLAR EDUCATIONAL FOUNDATION OF CALIFORNIA.** Ten scholarships of $50 each will be given annually to students enrolled at San Diego State College. Applications are received by the Committee on Loans and Scholarships of the College. Final awards are made on basis of ability, need, and personality, with preference shown upper division students.

**LA MESA EVENING WOMEN'S CLUB.** A $75 scholarship is awarded a senior in high school who is entering San Diego State College. Selection is made by the club.

**LINKLETTER, ART.** Each June four $50 awards will be made to students graduating from San Diego City and County high schools: (1) one to a girl and one to a boy graduating from high schools with enrollment of 1,000 or over; and (2) one to a boy and one to a girl from high schools with enrollment under 1,000. Applications must be sent to the Committee on Loans and Scholarships of the College. Selection is based on scholarship, citizenship, and need.

**MARCY, MAY FINNEY.** Fifty-dollar scholarships are awarded from this fund to women students in upper division. Applications are made to the Dean of Women and awards made upon recommendation of the faculty Committee on Loans and Scholarships to Mrs. Marcy and a committee of members of Cap and Gown on San Diego State College campus.

**NOMA SCHOLARSHIP.** Presented by the National Office Management Association. $100 a year is provided to a student planning to major in Office Management. The scholarship will be restricted to students desiring to major in Office Management beginning with their junior year. Applications may be secured from the Office of the Dean of Women or the Chairman of the Department of Business Education, Secretarial and Office Management, not later than May 15th each year. The student chosen will be notified by June 10th.

**NORTH PARK KIWANI-ANNES.** One scholarship of $50 a semester for a year is awarded annually by this group to a male student preparing for teaching. The recipient must have at least junior standing at the time and be approved by the Committee on Loans and Scholarships.

**OSTEOPATHY AUXILIARY** of San Diego County awards annually $100 to a student who has graduated from San Diego State College and has been accepted for enrollment in the College of Osteopathy in Los Angeles.

**PANHELLENIC OF SAN DIEGO STATE COLLEGE.** $50 is given annually to the sorority member who has made the highest grade point average in the fall semester.

**P. E. O. SCHOLARSHIPS.** Various chapters of this organization assist worthy students in amounts ranging from $15 a month to $50 a semester. Usually the selection for the awards is made by the chapter itself.

**PI LAMBDA THETA.** An annual scholarship of $50 will be given to a senior student in education. The selection will be made by the fraternity with approval of the Committee on Loans and Scholarships.

**SAN DIEGO BUSINESS AND PROFESSIONAL WOMEN'S CLUB.** A $50 scholarship is awarded annually to a worthy young woman attending San Diego State College having at least a "C" average.

**SAN DIEGO CITY PANHELLENIC.** Two $50 scholarships are awarded annually to two upper division women students. Applications are made through the faculty Committee on Loans and Scholarships and selection is left to the discretion of the committee.

**SAN DIEGO CITY TEACHERS ASSOCIATION.** Two scholarship of $50 each are presented each year to prospective teachers with no restrictions as to college year. Applications are made on forms supplied by the San Diego City Teachers Association and are reviewed by the association's committee on scholarships. Personal interviews are required, and final selection is made by that committee.

**SAN DIEGO COUNTY TEACHERS ASSOCIATION.** From two to four $100 scholarships are made available annually by this group of teachers. Awards are made to students in the field of elementary education and final selection rests with the Committee on Loans and Scholarships.

**SAN DIEGO SOCIAL WORKERS CLUB.** A scholarship of $50 each semester is made available for an upper division student intending to enter the field of social work, who has above average scholarship and shows evidence of financial need. Awards are made each semester by the Committee on Loans and Scholarships. Applications may be secured at the Office of the Dean of Women.

**SENN, PERCIE BELL, SCHOLARSHIP IN PUBLIC SPEAKING.** An annual scholarship is made possible by the generosity of Admiral Elliott Senn, who has donated $1,500 to the San Diego State College Foundation for the purpose of assisting students in public speaking. This will be awarded to an entering freshman or any qualified student in the field of debate. Awards are made by a committee appointed from the Speech Department, with the final approval of the faculty Loans and Scholarships Committee.

**SOUTHLAND CLUB SCHOLARSHIP.** $50 award made available by the Southland Club for Business and Professional Women to a junior or senior woman student who plans to enter business or a profession. The student must have at least a "B" average; she must have been graduated from a San Diego City or County high school and must be of good moral character and in financial need. Applications made at the Office of the Dean of Women and approved by the Committee on Loans and Scholarships.

**STEINMAN-HILLEL.** Mr. and Mrs. Lou Steinman, members of the San Diego Lasker Lodge of the B'nai B'rith, which sponsors the Hillel organization on the San Diego State College campus, have set aside $400 for scholarships, $50 to be awarded annually for the next 8 years to a student who has done the most to further the cause of interfaith cooperation among the students of the campus. The selection of the awardee shall be made by a committee of three judges.

**STOTT, DOROTHY CRANSTON.** Each June a scholarship of $100 will be awarded to a student who has attended the San Diego State College for at least two years and who is being graduated or has been graduated by the San Diego State College with a major in English who begins or continues work in the San Diego State College, or in any other accredited college or university, towards a higher degree or credential. The selection is made by the Department of English with approval by the Committee on Loans and Scholarships.

**STOTT, K. W.** Each June a scholarship of $100 will be awarded to a student who has attended the San Diego State College for at least two years and who is being graduated or has been graduated by the San Diego State College with a major in History who begins or continues work in the San Diego State College, or in any other accredited college or university, towards a higher degree or credential. The selection is made by the Department of History with approval by the Committee on Loans and Scholarships.

**TEACHER EDUCATION SCHOLARSHIP.** The California Congress of Parents and Teachers, Inc., each year gives $300 to be awarded to one or two students. Selections are made upon the following conditions: (1) The recipient must have high qualifications and be in financial need; (2) The scholarship will be granted to students training to teach in the public elementary schools of California; and (3) The award shall be limited to students in the junior and senior years and graduate level.

**TOWN AND COUNTRY CLUB, ESCONDIDO, CALIFORNIA.** A $200 scholarship is given an outstanding student graduating from Escondido High School who plans to attend San Diego State College. Qualifications for this award and final selection are made by the Town and Country Club.

**VISTA BUSINESS AND PROFESSIONAL WOMEN'S CLUB.** $100 scholarship made available to one or more International students to assist them with tuition fees.

**WALKER, RALF MARC.** A scholarship in the amount of $500 is made available by the Walker-Scott Corporation in memory of the late Mr. Ralf Marc Walker to a woman student majoring in merchandising or retail trade at the San Diego State College. The scholarship is presented to a girl in Walker's Hi-Debber Council each year. The total scholarship is deposited in the San Diego State College Foundation and is handed to the recipient at the rate of $50 a semester for each of the first three years and $100 a semester for the two senior semesters.

**WEINBERGER, HENRY, INTERFAITH SCHOLARSHIP.** A scholarship of $100 is awarded in April of each year to the student of any religious faith enrolled at the San Diego State College who is judged to have done the most to further interfaith ideals among the students of the college during the year of the award. This scholarship is made available by Mr. Henry Weinberger of the Lasher Lodge of B'nai B'rith, under auspices of the B'nai B'rith-Hillel Councilorship on San Diego State College Campus.

**WOMEN'S AUXILIARY OF SAN DIEGO DENTAL SOCIETY.** An annual award of $100 is made available by the Women's Auxiliary of San Diego Dental Society to an outstanding male student in pre-dentistry.

## LOANS

Short term loans are available to students who have attended the San Diego State College for at least one semester and who have demonstrated ability to do satisfactory college work. Applications for loans are made to the Committee on Loans and Scholarships through the Office of the Dean of Men or Dean of Women.

# ADMISSION AND REGISTRATION

## GENERAL ADMISSION REQUIREMENTS

High school graduates and other applicants possessing equivalent preparation may be admitted to this college upon evidence of fitness to profit by college instruction, such fitness to be shown by previous scholastic records, by evidence of good moral character and personal qualifications, and by satisfactory scores on tests which the college may require.

Application for admission should be made at the Admissions Office.

## ADMISSION OF HIGH SCHOOL GRADUATES

(1) A high school transcript must be presented showing satisfactory scholarship, and (2) applicants must demonstrate readiness for college instruction by making satisfactory scores on such tests as the college may designate.

**Regular status** will be granted if the student has earned A or B grades in not less than 16 semester courses during the tenth, eleventh, and twelfth grades.

**Provisional status** will be granted if the student has earned A or B grades in not less than 12 semester courses during the tenth, eleventh, and twelfth grades. Individuals who fall slightly below the above standard may be admitted to provisional status if qualifying examination scores indicate probable success in college. One year is allowed for transfer to regular status which may be attained upon completion of 24 or more units of college work with grade average of C or better. Full credit is allowed for all regular college work completed.

## ADMISSION BY EXAMINATION

Certificates of successful examination before the College Entrance Examination Board will be accepted when candidates cannot meet the above scholarship requirements.

## ADMISSION OF ADULTS TO SPECIAL STATUS

**Adult special status** may be granted, in exceptional cases, to persons over 21 years of age who do not fully meet the college entrance requirements provided that ability to do college work is satisfactorily demonstrated through qualifying examinations administered by the college. Such students may be transferred to regular status upon completion of 24 or more units of college work taken in residence with grade average of C or better. Full credit is allowed for all regular college work completed.

**Special students** are those students carrying courses in the Extended Day Program only or other students who may be granted permission to take limited work. Special students are not eligible as candidates for a degree until all entrance requirements have been met; however, courses satisfactorily completed carry full college credit.

**Special graduate students** are graduates who have not qualified for admission to graduate status. (See *Admission to Graduate Study.*)

## ADMISSION WITH ADVANCED STANDING

Credit earned in recognized institutions of collegiate grade will be evaluated and advanced standing allowed accordingly toward the graduation requirements of this institution. Applicants must show an average grade of C or better for all college work, for the last college attended, and for the last semester of attendance in order to qualify for regular status. A student who enters with advanced standing is one who has completed at least 12 units of passing work in another collegiate institution. However, no applicant may disregard his collegiate record and apply for admission only on the basis of his high school work. No credit earned after a student has accumulated 64 units of work in all types of collegiate institutions may be transferred from a junior college.

An applicant from an unaccredited college may be admitted by action of the Board of Admissions if his college record and qualifying examinations meet the admission requirements. Credits earned in unaccredited colleges or universities may be accepted provisionally, but will not be counted toward graduation requirements until the student has earned 24 semester units in residence with at least a C average.

Students seeking admission with advanced standing must furnish complete transcripts for all work attempted beyond the eighth grade. If an official evaluation is desired, a deposit of $2 must accompany the application and be received together with all transcripts at least 30 days before the date of registration. At least 45 semester units must be completed before a student may apply for an evaluation.

## ADMISSION TO GRADUATE STUDY

Admission to the college must first be secured. Apply at the Office of Admissions.

**Graduate status** may be granted to applicants who have regularly applied at the Office of Admissions and have filed official transcripts as evidence of their possession of a bachelor's degree from an accredited institution. Refer to master of arts degree and to Teaching Credentials.

**Graduate special status** is granted to those who are provisionally admitted to graduate study. It is given to a student (1) who has not completed all admission procedures required for graduate status and (2) to a student whose bachelor's degree was earned at an unaccredited college. A student from an unaccredited college will be eligible for graduate status when he has earned a grade point average of 1.5 on 12 or more units of approved upper division work at this college and has cleared all undergraduate deficiencies.

**Admission to candidacy** for the master's degree or for a teaching credential may be achieved by meeting the respective specific requirements. Refer to the section of the bulletin on the master of arts degree.

**Admission to courses numbered 200-299** requires graduate status and the meeting of specific prerequisites. A graduate student who may be permitted to enter a graduate course pending full graduate status will be given only upper division credit if graduate status is not achieved by the end of the term in which the course is given.

## DEGREES OFFERED

The following degrees are offered by the college: bachelor of arts, bachelor of science, bachelor of education, and master of arts.

## CERTIFICATES OFFERED

The following certificates are offered by the college: Certificate in Public Administration and Certificate in Social Work Administration. Requirements for these certificates may be completed in the extended day program. For further explanation of requirements, refer to the section of the bulletin on public administration.

## EXTENDED DAY PROGRAM

In order to meet the needs of adults in the community for work on the college level, courses are offered in the late afternoon and evening under an extended day program. These include both undergraduate and graduate courses and carry full college credit. Classes offered under this program consist of those courses normally scheduled as part of the regular college offerings and are taught by faculty of the college, but moved to a late afternoon or evening hour to permit in-service teachers, public personnel, businessmen, and others to attend. These courses cover a wide range of academic and educational subjects including education, business administration, public administration, engineering, and the sciences. A special bulletin describing the current offerings is issued each semester and may be obtained upon request from the Office of the Dean of Educational Services.

## EXTENSION PROGRAM

In order to serve more adequately the needs of the community, the college cooperates with off-campus organizations and groups in arranging extension classes in response to expressed needs when the group is sufficiently large to finance the instruction. Offerings are made each semester in a number of departments including education, business administration, and the arts and sciences. Classes may be organized at various points within San Diego and Imperial Counties. A minimum of 15 to 20 students is usually required in order to establish a class. The usual class carries two units of credit and meets once a week, either in the late afternoon or evening. The minimum basic fee is $6 per unit. Interested persons desiring detailed information regarding organization of classes or current offerings should contact the Dean of Educational Services.

## AUDITORS

Properly qualified persons may apply for admission to attend classes as auditors. Such students pay the same fees as those who take equivalent work for credit.

## TESTS REQUIRED AT REGISTRATION TIME AND LATER

1. A physical examination is required of all students entering or reentering the college after an absence of more than one semester, except that students carrying six units or less are not required to take the physical examination. This examination is scheduled during the orientation period.
2. All entering students are required to take a college aptitude test, and tests for competence in English, mathematics and in speech. Remedial courses are established in mathematics and speech for students failing these tests. Exceptions may be made for graduate students and for those who register for six units or less and for those registered only in Extended Day classes.
3. All entering freshmen and college transfer students who present less than 12 semester units of college credit must take the regular battery of achievement and aptitude tests, including tests for competence in English, mathematics, and speech. Remedial courses are established for students failing these tests.
4. Students entering teacher education should see admission requirements outlined under Admission to Teacher Education.

## LATE REGISTRATION

Students who register after the scheduled registration days are subject to a late registration fee of $2. Students may be accepted for late registration with the approval of the Registrar or Admissions Officer within two weeks beginning with the first day of class instruction. Registration will be closed after that date. Students failing to complete all registration requirements within the period allowed, as announced in registration instructions, are subject to cancellation of registration.

## CHANGES IN REGISTRATION

A student is responsible for any change in his program after the registration book has been filed. Forms for changes in program must be secured at the Registrar's Office. A fee of $1 is charged.

# GENERAL REGULATIONS

## INFORMATION

Inquiries relative to the college should be directed to the Registrar's Office.

## NUMBERING OF COURSES

Courses numbered 1 through 99 are in the lower division; those numbered 100 through 199 are in the upper division; and those numbered 200 or over are in the graduate division. Courses numbered 300 or over are professional education courses on the graduate level.

## SCHOLARSHIP, GRADES, AND GRADE POINTS

The following grades are used in reporting the standing of students at the end of each semester: A, excellent; B, good; C, fair; D, passed; F, failed; I, incomplete; E, conditioned (may be made up to grade of D); Cr. credit (without grade); WP, withdrawal passing; and WF, withdrawal failing.

Grades of I or E must be made up by the end of the next semester in which the student is registered; otherwise the grade of F will be recorded.

Grade points are assigned as follows: Grade A, 3 points per unit; B, 2 points per unit; C, 1 point per unit; D, no point per unit; F or WF, no point per unit. Grades of I, Cr, or WP are disregarded in computing grade points. The grade of E is treated as no point per unit until a final grade is recorded. The number of grade points a student has earned in a subject is determined by multiplying the number of points he has received by the number of units allowed. The grade point average is determined by dividing the grade points earned by the number of units attempted. A student must earn at least a C average in all work undertaken at the college to qualify for a degree or a transcript of record with recommendation to another collegiate institution. Any course may be repeated, but not for additional credit; however, only the second grade earned is considered in the student's average.

## CLASS, UNITS OF WORK, AND STUDY LIST LIMITS

Students who have completed 0 to 29 units of work are classified as freshmen; 30 to 59 units as sophomores; 60 to 89 units as juniors; and 90 or more as seniors.

A unit of credit represents 50 minutes of lecture or recitation combined with two hours of preparation per week through one semester, or three hours of laboratory or field work in the case of laboratory credit.

Students are not ordinarily permitted to enroll for more than 16½ units of credit toward graduation. A normal semester's program is 16 units.

Certain exceptions to this rule exist. If during the preceding semester the student has carried at least 12 units: (1) and a grade point average of at least 1.5 was earned, 17½ units may be carried for credit toward graduation; (2) and a grade point average of 2.0 was earned, 18½ units may be carried.

Exceptions to these regulations may be secured only through a petition to the Scholarship Committee.

No student may register for less than 12 units (the minimum full-time load) without the approval of the Dean of Instruction.

## PROBATION AND DISQUALIFICATION

### PROBATION

Any student whose scholarship record shows a cumulative deficit of seven or more grade points below a C average for all college work undertaken or for all work taken at this College will be placed on probation. Probation may be continued provided the student does not increase his grade point deficiency. The student will remain on probation until the grade point deficiency has been reduced below seven for all work undertaken and all work taken at this college.

A student in provisional status who does not reclassify to regular status upon the completion of 24 units of work will be placed on probation. Probation may be continued until the student is reclassified to regular status, provided the grade point deficiency is not increased.

A student with advanced standing from another college who has been admitted on probation by the Board of Admissions will remain on probation until all grade point deficiencies have been removed and an over-all grade point average of 1.0 has been attained.

### DISQUALIFICATION

Any student on probation whose scholarship falls belows a grade point average of 1.0 in any single semester is disqualified from further attendance at the college.

Any student who fails to pass one-half of the units attempted during any single semester is disqualified from further attendance at the college.

A disqualified student may be reinstated for reasons satisfactory to the Board of Admissions. Applications for reinstatement must be made on forms which may be obtained at the Office of the Registrar.

## WITHDRAWALS FROM CLASS

Forms for withdrawal from class may be obtained at the Registrar's Office. If a student withdraws from class during the first seven weeks of a semester, a grade of WP will be recorded upon his permanent record for each class which he has dropped. If he withdraws during the remainder of the semester, either a WP or WF will be recorded, depending on whether he is passing or failing the course at the time. WF is equivalent to a failing grade.

## TRANSCRIPTS OF RECORD

Students may secure upon request one transcript of record without fee. Thereafter, a fee of $1 is charged for each transcript secured upon request. Once a student has matriculated in this college, transcripts from other schools will not be returned, or copies of them made. No fees are charged for transcripts required for military purposes.

Transcripts in the possession of students are to be regarded as unofficial records.

## EVALUATIONS

An evaluation of credit for graduation should be requested by a student as soon as 45 units have been earned. Applications may be made at the Evaluations Office. Students having met all admission requirements for the arts and sciences or teacher education curricula, who are enrolled for seven units, or more, of college work in a regular semester, will not be charged the evaluation fee.

An evaluation remains in effect so long as a student completes 12 units of work at San Diego State College within each two-year period beginning wth the term immediately following the one in which the evaluation is made (includes summer session term). Any evaluation is subject to changes in requirements imposed on the College by the State Board of Education.

## ELIGIBILITY FOR DIRECTED TEACHING

No student shall be eligible for directed teaching (Education 116) leading to the kindergarten-primary, general elementary, general junior high, and special secondary credentials who has not completed 75 units, education course prerequisites, been admitted to Teacher Education, and whose entire record, as well as for the preceding semester, does not average at least a 1.2 for all credentials except the junior high and general secondary credentials which require a 1.5 grade average.

No student shall be eligible for directed teaching (Education 316) leading to the general secondary credential who has not been admitted to the teacher education program prescribed for admission to candidacy for this credential.

## THE HONORS PROGRAM

Any student who at the end of the sophomore year has either attained an over-all grade point average of 2.5 or who has attained a grade point average of 2.75 in his major and not less than 2.0 in fields outside his major, and who has received the approval of his department or departments, may elect the honors program. Such election will enable the student to pursue a special program as outlined below. Any student who feels that his qualifications approximate closely the scholarship standards stated above may request admission to the honors program, subject to the approval of his department or departments, and of the Committee on Honors.

Any student who wishes to apply for entrance into the honors program may do so by filling out cards to be obtained from the Registrar's Office. The application should be approved by the 10th calendar day following the first day of instruction. Units earned by students doing individual study under this plan will be recorded under the symbol 166 and will be subject to the formulated rules dealing with limitations of student load.

Students in the honors program, so far as the facilities of the department and the best interests of the students under its charge allow, shall be treated as benefits their individual needs and as their individual capabilities warrant. They shall be eligible to enroll in honors or special study courses, credit in such courses to be limited to six units per semester unless otherwise recommended by the major department or departments and approved by the Honors Committee. In addition, they shall not be held to regular attendance in the established courses of their departments if, in the opinion of the instructor, the objectives of such courses can be achieved through special assignments and examinations. With the consent of the major department or departments, requirements concerning minors and specific courses or sequences in the major may be modified. Each honor student shall be assigned to a member of his major department for advice and direction.

Students in the honors program who fail to take advantage of the opportunities there offered may at the end of any semester be required to withdraw from the honors program upon notification of the major department or departments. Students not in the honors program who show unusual capacity, may request to be transferred to the honors program contingent upon recommendation of the department and the Committee on Honors at the end of any semester.

## THE DEGREE WITH HONORS AND WITH DISTINCTION

Upon recommendation of the Committee on Honors, graduation with honors shall be granted to the upper 10 percent of the graduating class. Each department shall determine which students it will recommend for distinction in the major field at graduation, and report its recommendation to the Committee on Honors for transmission to the faculty.

## EXAMINATIONS

No final examination shall be given to individual students before the regular time. Any student who finds it impossible to take a final examination on the date scheduled must make arrangements with the instructor to have an incomplete grade reported and must take the deferred final examination not later than the end of the first semester of attendance following that in which the incomplete was given. No exception shall be made to this rule without the approval of the Dean of Instruction and the instructor concerned.

## CREDIT FOR EXTENSION COURSES

The maximum amount of extension credit which may be accepted toward the minimum requirements for the bachelor of arts or the bachelor of science degree is 24 semester units, not more than 12 of which may be transferred from another college or university. The term "extension credit" refers to both extension class work and work taken by correspondence. Extension credit does not count in satisfaction of the minimum residence requirement. **Extension courses are not accepted for graduate credit toward the master's degree.**

## CREDIT GRANTED FOR MILITARY SERVICE

The college is guided by the recommendations of the American Council on Education in granting undergraduate credit toward the bachelor's degree for military service.

# THE MASTER OF ARTS DEGREE

## NATURE OF THE DEGREE

The master of arts degree is offered at San Diego State College in the field of teaching and for other teaching and supervisory services. Students receiving the degree must hold a valid regular day school service California credential other than an emergency or provisional credential; or be a foreign citizen preparing to teach in foreign countries; or be a licensed teacher from another state with one year of experience; or be an approved applicant preparing to teach or supervise in institutions not requiring teaching credentials. Students may elect to concentrate in a subject-matter major or in education. The following areas of concentration are now available:

*Teaching Majors*: Art, chemistry, business education, English, foreign language, health and physical education, mathematics, music, history, life science (botany and zoology), physics, psychology, and social science.

*Education:* Elementary, secondary, administration and supervision, and student personnel services.

*School Psychologist and School Psychometrist:* Psychology or educational psychology.

*Personnel Supervision and Training:* For instructional and supervisory service in business, government, and industry.

## REQUIREMENTS

Students who meet the following requirements are eligible for graduation with the master's degree:

A. A minimum of 30 units of approved graduate work beyond the bachelor's degree. Thirty units must be completed within the seven year period immediately preceding the date when all of the requirements for the degree are completed. For justifiable reasons, the college may extend this period.

B. 24 units in residence. Courses taken prior to the summer session of 1946 at San Diego State College, or any other California State College, may **NOT** be used as graduate work.

C. Grade point average of 2.0 in all work taken after the bachelor's degree. Only grades of A, B, and C are acceptable toward the master's degree. (Marking system: Grade of A, 3 grade points; B, 2 grade points; C, 1 grade point; D, 0 grade points.)

D. Completion of the requirements for an approved California teaching credential, or the holding of one, such as the general elementary, general secondary, junior high, special secondary school, and school psychometrist credentials; or be a foreign citizen preparing to teach; or be a licensed teacher in another state, with one year of experience; or be preparing to teach or supervise in an institution which does not require a credential.

E. Satisfactory completion of the candidate's degree program as approved by the Graduate Council.

F. Satisfactory completion of a thesis or project, except in foreign language.

## ADMISSION TO GRADUATE STUDY

A. Graduate Status may be granted to applicants who have regularly applied and have filed official transcripts at the Office of Admissions as evidence of their possession of a bachelor's degree from an accredited institution. (Two transcripts must be filed by students who expect to become candidates for the master's degree.)

B. Provisional admission to graduate study (Graduate Special Status) may be granted to one who holds a bachelor's degree from an unaccredited college. Such a student will be eligible for Graduate Status when he has earned a grade point average of 1.5 on 12 or more units of approved upper division work at this college and has cleared all undergraduate deficiencies. Special status is given also to those students who have not completed the regular admission procedures.

C. Apply at the Office of Admissions for admission to the college. For further details, refer to the section of the bulletin on Admission and Registration.

## ADMISSION TO CANDIDACY

**A candidate for the master's degree must qualify as follows:**

A. **Apply for admission to candidacy at the Graduate Office. Students should apply** during the first graduate term in attendance.* Admission cannot be completed, **however, until the student has earned 12 units at San Diego State College, or six units if his undergraduate grade point average was 1.5 or better.**

B. **Earn and maintain a grade point average of 2.0 on all graduate work.**

C. Satisfactorily complete the following: (a) scholastic aptitude test for graduates, (b) scholastic achievement test, and (d) such departmental tests as may be required.

D. Receive approval of candidate's major department.

E. File with the Graduate Office a complete program of study, which has been approved by the adviser.

## GENERAL REGULATIONS

A. **Extension and correspondence courses are not acceptable toward the degree.**

B. **Maximum study load: Summer session, one unit per week of attendance; fall or spring, 15 units per semester of full-time attendance. If employed full time, five** units of courses numbered 100-199 or three units of courses numbered 200-298.

C. All candidates who are taking the degree with school service credentials must complete two units in Education 290 and one additional unit in a course in bibliography (290) in the major department. Candidates preparing to teach or supervise in institutions that do not require a credential will substitute an approved course in procedures of investigation and report.

D. Candidates in all majors, excepting foreign language, shall complete a project or thesis, for which three units of credit are allowed. Foreign language students must pass a comprehensive examination; they shall, however, complete eight units of "200" numbered courses as specified below.

E. The minimum requirement for a concentration in a major shall be: (1) eight units of courses numbered 200-299, which may include credit for a project or thesis and one unit in bibliography, and (2) six additional units in the major or an approved related field, selected from upper division or graduate courses. Candidates who are preparing to teach or supervise in institutions which do not require a teaching credential must take 12 units in education courses.

F. **12 units of work must be earned after admission to candidacy.**

G. **10 units must be in courses numbered 200-299.**

H. Two official conferences between the student and his thesis committee are required: one for planning, which is to be held immediately after the appointment of the committee, and one for evaluation at the time of completing the first draft of the thesis.

I. **The project or thesis must be completed four weeks in advance of the date of the convocation at which the degree is to be conferred.**

J. An application for graduation must be filed at the Graduate Office four weeks before date of graduation.

K. Candidates are advised to keep in touch with the Graduate Office concerning specific requirements for the typing of the project or thesis and final dates for submitting bound copies, dates of graduation, and other routine procedures concerning the degree.

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* (Fall or Spring: Apply during first six weeks of semester. Summer Session: Apply during first two weeks of term.)

# GENERAL REQUIREMENTS FOR THE BACHELOR OF ARTS AND BACHELOR OF SCIENCE DEGREES

## TYPES OF CURRICULA

San Diego State College offers two types of curricula leading to the A.B. and B.S. degrees:

(1) The curricula leading to the California teaching credentials, and

(2) The curricula in arts and sciences.

## GRADUATION REQUIREMENTS

Any student who enters San Diego State College for the first time, beginning with Summer Session 1951, must complete requirements of 124 units for the A.B. degree or 128 units for the B.S. degree.

Any student who has completed 12 units of work at San Diego State College has the option of being graduated under the requirements in effect for 1950-1951 (120 units) or the requirements to be in effect for 1951-1952. If he chooses the first set of requirements, he must earn 12 units within each two year period, beginning with Summer Session 1951, to remain eligible for graduation under those requirements. Otherwise, a new evaluation for the new requirements will be required.

### GRADUATION REQUIREMENTS EFFECTIVE 1951-1952

(a) A minimum of 124 semester units for the A.B. degree or 128 semester units for the B.S. degree, representing a four-year college course, are required for graduation.

(b) The last 24 units of work leading to the bachelor's degree must be completed at this college, including registration in at least two semesters, or summer session equivalent on a week for week and unit for unit basis, for a total of 36 weeks of attendance.

(c) At least a C average (1.0) in scholarship is required in all college work attempted, in all work taken at this college, and in all upper division work in the major field.

(d) At least 40 upper division units are required for the A.B. degree or at least 36 upper division units for the B.S. degree.

(e) The state requirements in United States history, Constitution, and American ideals must be completed for the A.B., B.S., or B.Ed. degree.

(f) All requirements in general education, the major and minor fields and any other requirements made by the college must be completed for graduation.

### TESTS IN ENGLISH, MATHEMATICS, AND SPEECH

Each student must demonstrate competence in the use of English, mathematics, and speech as determined by tests administered by the college. Students failing to pass these tests satisfactorily are required to enroll in special remedial courses designated by each department concerned. Passing the tests or completion of designated courses is a requirement for graduation.

### AMERICAN HISTORY, INSTITUTIONS AND IDEALS, UNITED STATES CONSTITUTION, AND CALIFORNIA GOVERNMENT

Each student of a state college to qualify for graduation shall demonstrate competence in the Constitution of the United States, and in American history, including the study of American institutions and ideals, and of the principles of state and local government established under the Constitution of this State, by completing appropriate courses, or by passing a comprehensive examination on these fields prepared and administered by each college. Students transferring from other institutions of collegiate grade, who have already met this requirement in college, shall not be required to take further courses or examinations therein.

This graduation requirement may be fulfilled by any one of the following alternatives:

(1) By satisfactorily passing comprehensive examinations in both American history, institutions and ideals, and in the United States Constitution and principles of California government.

(2) By satisfactory completion of one of the following groups of courses:
  (a) History 17A and 17B
  (b) History 172A and 172B
  (c) Political Science 71A and 71B
  (d) Political Science 139A and 139B

(3) By satisfactorily passing a comprehensive examination in American history, institutions and ideals and completion of one of the following groups of courses:
  (a) Political Science 101
  (b) Political Science 137A and 137B
  (c) Social Science 45 (for students with provisional status)

(4) By satisfactorily passing a comprehensive examination in the United States Constitution and principles of California government and completion of one of the following groups of courses:
  (a) History 8A and 8B
  (b) History 179A and 179B

(5) By completion of one of the following groups of courses covering American history, institutions and ideals and completion of one of the following groups of courses covering the United States Constitution and principles of California government:

| *Courses on U. S. History* | *Courses on U. S. Constitution* |
|---|---|
| (a) History 8A and 8B | (a) Political Science 101 |
| (b) History 179A and 179B | (b) Political Science 137A and 137B |

(6) By completion of the graduation requirement in American history, institutions and ideals and the United States Constitution and principles of California government in other institutions of collegiate grade.

Students who have met the graduation requirements in American history, institutions and ideals and in the Constitution of the United States by completion of courses in institutions of collegiate grade outside the State of California, but who have not met the graduation requirement in principles of California State and local government, may satisfy this requirement by satisfactory completion of one of the following courses:
  (a) Political Science 142 (also numbered under Journalism)
  (b) Political Science 143 (also numbered under Journalism)
  (c) Political Science 101 (provided that this course is not a repetition of a course taken elsewhere)
  (d) History 189

## LOWER DIVISION AND UPPER DIVISION COURSES

A student is considered to have lower division standing until he has earned 60 semester units, at which time he attains upper division standing.

Courses numbered 1-99 are lower division courses; courses numbered 100-199 are upper division courses.

A student with lower division standing is not eligible to take upper division courses, with the following exceptions: A student in the last semester of his sophomore year who is approaching upper division standing carrying sufficient lower division units to complete the required minimum of 60 units may carry upper division units for the remainder of his study load. A student with sophomore standing may carry upper division courses for upper division credit provided that he has the written approval of the chairman of the department and the Dean of Instruction. This written approval must be filed in the Office of the Registrar on the form "Adjustment of Academic Record." Blank forms may be obtained by the student at the Office of the Registrar.

## APPLICATION FOR OFFICIAL EVALUATION

Immediately upon completion of 45 units of work, the student should apply to the Registrar's Office for an official evaluation in terms of his major field and requirements for graduation. An evaluation is a summary of work completed and requirements to be completed for the degree and/or teaching credential. Students who delay in requesting official evaluations may be subject to any additional requirements made by the college from time to time. Students receiving official evaluations who continue uninterrupted attendance at this college are held only to the requirements in effect at the time the evaluation is made, except in cases where the State Department of Education imposes new regulations.

## TRANSFER TO GRADUATE SCHOOLS

Attention of students who plan to transfer to the graduate school of the University of California is called to the fact that the university reserves the right to evaluate and possibly reduce the credit in certain work in which this college has given credit toward the baccalaureate degree. Examples of such work would be credit for nurse's training, credit transferred from certain foreign schools, and certain vocational courses in junior colleges.

# GENERAL EDUCATION REQUIREMENTS

Forty-five semester units in courses designated in the college bulletin and in the schedule of classes as general education must be completed in addition to courses required in the major field. These courses must be selected from the fields listed below with completion of the minimum number of units required and not exceeding the maximum number of units allowed in each field in order to satisfy the requirement of 45 units in general education. The pattern requirements in general education may be fulfilled by examinations with an accompanying reduction in the 45 units but without course credit.

For specific explanation of the requirements within each field of general education, refer to the explanation of requirements below.

| | *Minimum* | *Maximum* |
|---|---|---|
| (a) Social Sciences | 9 | 12 |
| (b) Natural Sciences | 9 | 12 |
| (c) Literature, Philosophy, and the Arts | 6 | 12 |
| (d) Communication: | | |
| Oral Communication | 2 | 2 |
| Written Communication | 3 | 6 |
| (e) Psychology | 3 | 6 |
| (f) Physical and Health Education: | | |
| Physical Education | 2 | 2 |
| Health Education | 2 | 2 |
| (g) Mathematics | 0 | 6 |
| (h) Foreign Languages | 0 | 6 |
| (i) Family Life Education | 0 | 6 |
| Total number of units required | 45 | |

## EXPLANATION OF REQUIREMENTS

(a) **Social Sciences:** A minimum of nine or maximum of 12 units must be selected from general education courses with at least three units in two or more of the following fields: anthropology, economics, geography (except Geography 1), history, political science, social science, sociology, and similar fields, including the required instruction in United States history, Constitution, and American ideals. **NOTE:** Courses in business, library science, philosophy, or psychology may not be used to satisfy the social science requirement.

(b) **Natural Sciences:** A minimum of nine or maximum of 12 units must be selected from general education courses in the natural sciences. At least one course of not less than three units must be selected in the life sciences from biology, botany, physiology, zoology, and similar fields; and at least one course of not less than three units in the physical sciences from astronomy, chemistry, Geography 1, geology, physics, physical science (except Physical Science 10), and similar fields. **At least one course must include laboratory work** for a minimum of one unit or the three-hour equivalent. **NOTE:** Courses in engineering, industrial arts, mathematics, or photography, may not be used to satisfy the natural science or laboratory requirement.

(c) **Literature, Philosophy, and the Arts:** A minimum of six or maximum of 12 units must be selected from general education courses in literature, philosophy, and the arts. At least one course of not less than three units must be selected in literature or in philosophy from courses in English, comparative literature, philosophy, or similar fields. Courses in the arts must be selected from the fine arts, including aesthetics, art, and music, or from the practical arts. A maximum of three units may be counted in the practical arts toward general education.

(d) **Oral and Written Communication:** Two units must be completed in oral communication by passing Speech Arts 3. Students failing the Speech Interview are required to register concurrently in Speech Arts 2, Oral Communication Laboratory, for one unit of credit which may not be counted toward general education requirements.

A minimum of three units, with a maximum of six units, must be selected from courses in written communication. All students must complete three units in English 1 or 41. Students failing the English Test are required to complete English A, or 40, for two units as a prerequisite for other courses in English. English A or 40 may not be counted toward general education requirements.

(e) **Psychology:** Three units must be completed in Psychology 1, or 40. An additional three units may be selected from other general education courses in psychology.

(f) **Physical Education and Health Education:** Two units must be completed in Health Education 21 and two units must be selected from general education courses in physical education.

The physical education requirement must be satisfied by completion of four semesters of activity courses for a minimum and maximum of two units. **NOTE:** Not more than one activity course may be counted within any semester and an activity course may not be repeated for credit, except courses designated as varsity sports.

(g) **Mathematics:** From zero to six units may be selected from general education courses in mathematics. Students failing the Mathematics Test must complete Mathematics X. This course may not be counted toward the general education requirements. **NOTE:** Any year-course in mathematics completed in high school may not be repeated in college for credit.

(h) **Foreign Languages:** From zero to six units may be selected from general education courses in foreign languages. **NOTE:** Year-courses in foreign languages completed in high school may not be repeated in college for credit, except that the last year-course in any foreign language sequence completed in high school may be repeated in college for a maximum of three units of repeated work to be applied toward graduation.

(i) **Family Life Education:** From zero to six units may be selected from general education courses in family life education. Courses in family life education may be found in the fields of business, health education, home economics, psychology, and sociology.

## COURSES IN GENERAL EDUCATION

Courses selected from the following groups may be counted toward the 45 units required in general education, unless the course is specifically required as part of the student's major field and within the limitations indicated in the section on General Education Requirements. These courses are described in the section of the bulletin on Announcement of Courses. An asterisk (*) preceding the course number designates the course as a general education course.

The courses listed below carry the number of units for the course in parentheses following the course title.

## SOCIAL SCIENCES

### Anthropology
1A-1B—General Anthropology (3-3)
54—Social Anthropology (3)
152—World Ethnography (3)
165—Ethnology and Race Psychology (3)

### Economics
1A-1B—Principles of Economics (3-3)
102—Comparative Economic Systems (3)
111—Economic History of U. S. (3)
131—Public Finance (3)
170—Government and Business (3)

### Geography
2—Introduction: Natural and Cultural Regions (3)
10—Economic Geography (3)
145—Conservation of Natural Resources (3)

### History
4A-4B—Modern Europe (3-3)
8A-8B—The Americas (3-3)
17A-17B—American Civilization (3-3)
121A-121B—Medieval History (3-3)
172A-172B—Constitutional History of U. S. (3-3)
179A-179B—Intellectual History of the American People (3-3)

### Political Science
1A-1B—Introduction to Government (3-3)
71A-71B—Introduction to American Government and Politics (3-3)
101—American Institutions (3)
105—American Political Thought (3)
111A-111B—Theory of the State (3-3)
137A-137B—Constitutional Government (3-3)
139A-139B—American Constitutional Development (3-3)
150A-150B—International Relations (3-3)

### Social Science
40—Contemporary Problems (3)
45—American Democracy (3)

### Sociology
45—Marriage and the Family (3)
50—Contemporary Social Problems (3)
51—Principles of Sociology (3)
110—Race Relations (3)
135—Marriage and the Family (3)
145—Social Psychology (3)

## NATURAL SCIENCES

### Astronomy
1—Descriptive Astronomy (3)
2—Modern Astronomy (3)
9—Practice in Observing (1)
101—Principles of Astronomy (3)
105—Historic Development of Astronomy (3)

### Biology
1—Survey of Biology (3)
3—Principles of Biology (3)
4—Plant and Animal Types (3)
41—Man and His Biological World (3)

### Botany
150—Readings in Biology (2)
160—Evolution (2)

### Chemistry
2A-2B—Fundamentals of Chemistry (3-3)

### Geography
1—Introduction: Physical Elements (3)

### Geology
2—General Geology (3)
3—General Geology Laboratory (1)
4—Physiography of U. S. (3)

### Physical Science
1—Introduction to Physical Science (3)
2—Introduction to Physical Science (3)
41—Man and His Physical World (3)
150—Readings in the Physical Sciences (2)

### Physics
2A-2B—General Physics (3-3)
3A-3B—Physical Measurements (1-1)
148—Introduction to Modern Physics (3)

### Zoology
150—Readings in Biology (2)
160—Evolution (2)
165—Human Heredity (2)

## LITERATURE, PHILOSOPHY, AND THE ARTS

### Aesthetics

2—Introduction to Music (3)
5—Art Orientation (2)
50—Appreciation and History of Art (2)
51—Survey of Mexican Art (2)
102—Great Music (3)
138—Introduction to Aesthetic Appreciation (1)
150—Appreciation and History of Art (2)
162—History and Philosophy of the Dance (2)

### Art

6A—Design (2)
8—Costume and House Furnishings (2)

### Comparative Literature

52A-52B—Masterpieces of World Literature (3-3)
101A—Modern Continental Fiction (3)
104A-104B—Spanish American Literature (3-3)
115—Bible as Literature (3)
138—Introduction to Aesthetic Appreciation (1)
140A-140B—Masterpieces of French Literature (3)
142—The Golden Age of German Literature (3)
152A-152B—Survey of Drama (3-3)

### English

2A-2B Freshman Literature (3-3)
42—Freshman Literature (3)
52A-52B—Masterpieces of World Literature (3-3)
101A—Modern Continental Fiction (3)
115—The Bible as Literature (3)
117A-117B—Shakespeare (3-3)
119A—English Romantic Poetry (3)
126B—Late 19th Century British Prose (3)
134—American Literature: 1910 to the Present (3)
149—The Study of Poetry (3)
152A-152B—Survey of Drama (3-3)

### Music

7A—Musicianship (3)
10A-B—Piano (1-1)
70A-B-C-D—Chamber Music (1-1-1-1)
75A-B-C-D—Symphony and Marching band (2-2-2-2)
80A-B-C-D—Symphony Orchestra (1-1-1-1)
85A-B-C-D—Chorus (1-1-1-1)
86A-B-C-D—Treble Clef (1-1-1-1)
87-A-B-C-D—Men's Glee Club (1-1-1-1)
88A-B-C-D—Workshop Chorus ($\frac{1}{2}$-$\frac{1}{2}$-$\frac{1}{2}$-$\frac{1}{2}$)
170A-B-C-D—Chamber Music (1-1-1-1)
175A-B-C-D—Symphony and Marching band (2-2-2-2)
180A-B-C-D—Symphony Orchestra (1-1-1-1)
185A-B-C-D—Chorus (1-1-1-1)
186A-B-C-D—Treble Clef (1-1-1-1)
187A-B-C-D—Men's Glee Club (1-1-1-1)
188A-B-C-D—Workshop Chorus ($\frac{1}{2}$-$\frac{1}{2}$-$\frac{1}{2}$-$\frac{1}{2}$)

### Philosophy

1A-1B—Introduction to Philosophy (3-3)
3A-3B—History of Philosophy (3-3)
101—Contemporary Philosophy (3)
129—Social Ethics (3)

### Practical Arts

Home Economics 5—Foods (3)
Home Economics 10—Clothing Fundamentals (3)
Industrial Arts 5—Introductory General Shop (3)
Industrial Arts 6—Intermediate General Shop (3)
Library Science 10—Use of the Library (2)
Physical Science 10—Introduction to Photography (3)

## COMMUNICATION

**Oral Communication**
Speech Arts 3—Oral communication (2)

**Written Communication**
English
1—Freshman Composition (3)
41—Freshman Composition (3)
61—Sophomore Composition (3)
106—Creative Writing (3)

## PSYCHOLOGY

**Psychology**
1—General
41—Psychology and Life (3)
106—Developmental Psychology (3)
145—Social Psychology (3)

## HEALTH EDUCATION—PHYSICAL EDUCATION

**Health Education**
21—Principles of Healthful Living (2)

**Physical Education (Women)**
1A-B—Fundamental Skills (½-½)
2A-2B—Folk Dancing (½-½)
3A-3B—Modern Dance (½-½)
4—Fieldball, Soccer, Speedball (½)
5—Softball, Volleyball, Hockey (½)
6—Basketball (½)
11A-B—Ballroom Dancing (½-½)
12A-B—Advanced Modern Dance (½-½)
13A-B—Archery (½)
14A-B—Badminton (½-½)
16A-B—Golf (½-½)
18A-B-C—Tennis (½-½-½)
19A-B—Bowling (½-½)
20A-B—Swimming (½-½)
21—Life Saving (1)
23—Sailing (½)
24—Hiking (½)

**Physical Education (Men)**
1A-B-C-D—Individual Adaptation (½-½-½-½)
2—Basketball (½)
2A-B—Folk Dancing (½-½)
3—Boxing (½)
4—Gymnastics (½)
5—Soccer (½)
6—Softball (½)
7—Touch Football (½)
8—Track and Field (½)
9—Volleyball (½)
10—Wrestling (½)
11A-B—Ballroom Dancing (½-½)
13—Archery (½)
14—Badminton (½)
15—Fencing (½)
16—Golf (½)
17—Handball (½)
18—Tennis (½)
19—Bowling (½)
20-A-B—Swimming (½-½)
23—Sailing (½)
24—Hiking (½)

## FOREIGN LANGUAGES

**French**
1—Elementary (3)
2—Elementary (3)
3—Intermediate (3)
4—Intermediate (3)
15—French Civilization (2)
16—French Civilization (2)
115—French Civilization (2)
116—French Civilization (2)

**German**
1—Elementary (3)
2—Elementary (3)
3—Intermediate (3)
4—Intermediate (3)
15—German Civilization (2)
16—German Civilization (2)
115—German Civilization (2)
116—German Civilization (2)

**Latin**
1—Elementary (3)
2—Elementary (3)
3—Intermediate (3)
4—Intermediate (3)

**Spanish**
1—Elementary (3)
2—Elementary (3)
3—Intermediate (3)
4—Intermediate (3)
15—Spanish Civilization (2)
16—Spanish Civilization (2)
115—Spanish Civilization (2)
116—Spanish Civilization (2)

## MATHEMATICS

**Mathematics**
- B—Plane Geometry (3)
- G—Mathematics for General Education (3)
- 7A-7B—Mathematical Analysis (3-3)
- 104—History of Mathematics (3)

## FAMILY LIFE EDUCATION

**Family Life Education**
- Business 20—Consumer Problems (3)
- Health Education 90—Physiology of Reproduction (1)
- Home Economics 1—General Home Arts (3)
- Home Economics 5—Foods (3)
- Home Economics 10—Clothing Fundamentals (3)
- Home Economics 135—Marriage and the Family (3)
- Home Economics 150—Home Management (3)
- Home Economics 170—Child Care and Development (3)
- Psychology 106—Developmental Psychology (3)
- Sociology 45—Marriage and the Family (3)
- Sociology 135—Marriage and the Family (3)

# BACHELOR OF ARTS DEGREE IN ARTS AND SCIENCES

## MAJOR REQUIREMENTS

One major field is required for the A.B. degree in addition to 45 units in general education courses. At least 40 units of the 124 required for graduation must be in courses carrying upper division credit.

The major in arts and sciences consists of a minimum of 24 upper division units with prerequisite and related lower division courses as prescribed by the department offering the major.

### Majors

Majors in Arts and Sciences are offered in the following fields:

- Art
- Bacteriology
- Botany
- Chemistry
- Economics
- English
- French
- Geography
- History
- Journalism
- Language Arts
- Life Science
- Mathematics
- Music
- Physical Education
- Physics
- Physical Science
- Political Science
- Psychology
- Romance Languages
- Social Science
- Sociology
- Spanish
- Speech Arts
- Zoology

### General Major in Vocational Curricula

The general major is planned for students who are preparing for vocations requiring a background of general training. General majors are offered in the following curricula: *Home arts, inter-American relations, prelegal, personnel management, public administration, recreation, social work.*

Students not electing one of these curricula who need a general type of training for other vocational objectives must consult with the Dean of Instruction before permission may be granted to follow the pattern for the general major.

In addition to the general education requirements, a student taking the general major must complete 36 upper division units chosen from three fields with not more than 15 units nor fewer than nine units from any one field. A minimum of a year-course in each field must be completed in the lower division as foundation for upper division work in the general major. A minor is not required; however, four additional upper division elective units must be completed to meet the minimum requirement for 40 upper division units for graduation.

All students following the pattern for the general major must obtain forms from the Office of the Dean of Instruction, complete the forms, and have the general major approved by the Dean of Instruction. The forms will then be submitted by the student to the chairman of each of the three departments comprising the general major for approval, revision, or rejection.

## MINOR REQUIREMENTS

The minor in arts and sciences may be required by the department offering the major. In departments not requiring a minor, the minor is optional with the student. A minor consists of a minimum of 15 units, or maximum of 22, six to nine units of which must be in courses carrying upper division credit as specified by the department.

### Minors

Minors in Arts and Sciences are offered in the following fields:

- Air Science
- Anthropology
- Art
- Astronomy
- Bacteriology
- Botany
- Business
- Chemistry
- Comparative Literature
- Economics
- Education
- Engineering
- English
- French
- Geography
- Geology
- Health Education
- History
- Home Economics
- Industrial Arts
- Journalism
- Life Science
- Mathematics
- Music
- Philosophy
- Physical Education
- Physical Science
- Physics
- Political Science
- Psychology
- Public Administration
- Recreation
- Sociology
- Spanish
- Speech Arts
- Zoology

# BACHELOR OF SCIENCE DEGREE IN ARTS AND SCIENCES

## REQUIREMENTS FOR THE MAJOR

One major field is required for the B.S. degree in addition to 45 units in general education courses. A minimum of 128 units is required for graduation. A minor field is not required.

The major consists of a minimum of 36 upper division units with prerequisites and related courses in the lower division as prescribed by the department offering the major. These lower division courses are considered part of the major and may not be counted toward the 45 units in general education, except as may be specified in each major field.

### Majors

Majors are offered in the following fields:

Bacteriology
Botany
Business
Chemistry
Engineering
Laboratory Technique
Life Science
Physics
Zoology

# PROFESSIONAL CURRICULA IN TEACHER EDUCATION

## ADMISSION TO TEACHER EDUCATION

Students who plan to earn teaching credentials or credentials for other school service should apply for admission to teacher education during the first semester of the sophomore year. Students entering the college at the end of the sophomore year will apply at the beginning of the junior year. No courses in education may be taken until admission is granted; any exception to this rule must have the approval of the Chairman of the Education Department. The standards for admission to Teacher Education are different from those for admission to the college; therefore, *admission to the college does not guarantee that the student will be admitted to teacher education.* The following requirements must be met for admission to the teacher education curricula:

1. A satisfactory score on the college aptitude test taken at the college.
2. Evidence of competence in the use of the English language and of satisfactory ability in arithmetic, handwriting, reading, and spelling indicated by having passed the Fundamentals Test. (See college calendar for dates of test which should be taken in the second semester of the *freshman year.*)
3. Assurance of correct speech habits and voice control by having passed a speech test given by the college, or by having satisfactorily completed a course in corrective speech.
4. Assurance of physical fitness by passing the college health examination given for teaching credential candidates.
5. If the student is to be a candidate for the general secondary credential or one of the special secondary credentials, he must furnish a recommendation from the chairman of that department stating that the student has ability and shows promise of teaching success in his field and that the department looks with favor upon his application.
6. The completion of the first two years or more of a given curriculum, or its equivalent, and of subsequent work with a grade point average of 1.2 or better for all credentials except the general junior high school or the general secondary, for which shall be required a grade point average of 1.5 or better in all work and 1.75 in the major field.
7. If the student is a candidate for any credential on the secondary school level (general junior high school, special secondary, or general secondary), or for the school psychometrist credential, he must have a satisfactory score on a General Culture Test.
8. If the student is a candidate for the general secondary credential, he must have a tentative program approved by the authorized departmental representative of his major field and the representative of Secondary Education.
9. All applicants need to be approved by an interviewing committee of the college faculty. In its evaluation the committee will consider the following factors established by the State Board of Education: intelligence, scolarship, professional aptitude, personality and character, speech and language usage, and many-sided interests.
10. Candidates for the school psychometrist credential must attain a satisfactory score on a comprehensive examination in psychology.

### Transfer Students

Students who have completed two or more semesters of work in another college, upon transferring to San Diego State College, should make application for admission to teacher education as soon as they enroll in the college. Transfer students admitted to the college with either upper division or graduate standing must take the necessary tests for admission to teacher education given during the orientation period at the beginning of their first semester at the college. (See college calendar for dates.)

### Transfer Students With Emergency Credentials in Elementary Education

Certain adaptations in the education courses have been made to meet the needs of experienced teachers who hold an emergency credential in elementary education. See the Coordinator of Elementary Education for details.

### Advanced Standing in Teacher Education

A student transferring into San Diego State College with advanced standing must complete a minimum of six units of professional education work in residence at San Diego State College before recommendation for a credential, regardless of extent of education work already completed elsewhere. Whenever a transfer student has had teaching experience, the college requires that a statement from the employer(s) be filed with the Registrar.

### Evaluation of Credits

After an interval of five years, courses in education are reevaluated and subject to reduction in credit, in light of such new requirements as may have been put into effect and changes in educational procedures. Students formerly in attendance will not be considered to be working in the curriculum until an evaluation and statement of credit has been secured from the Registrar's office. All courses taken either at this college or elsewhere must be approved by an official adviser in order to be credited toward meeting credential requirements or pattern requirements for a degree.

## TEACHING CREDENTIALS

San Diego State College is authorized by the State of California to recommend students for the teaching credentials listed below. To be recommended, students must complete, or have completed, the A.B. degree in one of the curricula offered for teachers.

| *The credential* | *Subjects and grades for which it is valid* |
|---|---|
| General Elementary | All grades through the eighth. |
| Kindergarten-Primary | Kindergarten through third. |
| General Junior High (must be taken with a minor in industrial arts or home economics, or with another credential). A special program is offered in combination with the General Elementary Credential | All subjects in grades seven, eight, and nine in all elementary or secondary schools. |
| General Secondary | All subjects in the public schools in grade 7 and above. |
| Health and Development | Authorizes to serve as supervisor of health in the capacity of school nurse. |
| Special Secondary in Art | Art in all grades of the public schools. |
| Special Secondary in Business Education | Business education subjects in all grades of the public schools. |
| Special Secondary in Music | Music in all grades of the public schools. |
| Special Secondary in Physical Education | Physical education in all grades of the public schools. |
| Special Secondary in Speech Arts | Speech in all grades of the public schools. |

| | |
|---|---|
| Special Secondary in Correction of Speech Defects | Correction of speech defects in all grades of the public schools. |
| Special Secondary for teaching the Mentally Retarded Child | To teach mentally retarded children in elementary and secondary schools. |
| School Psychologist | To serve as school psychologist. |
| School Psychometrist | To serve as assistant to the school psychologist. |
| Administration in Elementary Education | Authorizes for credential to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in elementary schools. |
| Supervision in Elementary Education | Authorizes for credential to supervise instruction in elementary schools. |
| Administration in Secondary Education | Authorizes for credential to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in secondary schools. |
| Supervision in Secondary Education | Authorizes for credential to supervise instruction in secondary schools. |
| Special Subject Supervision | Supervision in the special subject in all grades. |

## COMBINATION OF CREDENTIALS

Students who seek more than one teaching credential must complete in full the curriculum for each, with only such exceptions as are indicated in the statement of requirements.

A combination of the elementry school credential and the junior high school credential may be secured by completing the requirements for the elementary school credential and the following additional requirements.

(a) A junior high school teaching major.
(b) Education 100B in the major field or equivalent elementary education course.
(c) Three units of directed teaching, or equivalent, in a junior high school.
(d) Education 115B or 184A.

A combined program leading to the junior high and general elementary credentials is being worked out. Entering students interested in such a program should request an adviser for the general junior high credential.

A combination of the junior high school credential and a special secondary credential may be secured by completing the requirements for the special secondary credential and the following additional requirements:

(a) A junior high school teaching major, excluding the special secondary credential majors, and a teaching minor. This minor may be the special secondary field.
(b) Education 100B in the junior high school teaching major.
(c) Three units of student teaching in the junior high school teaching major.

The general elementary credential and the special secondary credential in the Correction of Speech Defects may be combined by (1) completing a speech minor, (2) directed teaching in speech correction, and (3) completing additional upper division requirements in speech, education, and psychology.

# GENERAL ELEMENTARY AND KINDERGARTEN-PRIMARY CREDENTIALS WITH THE BACHELOR OF ARTS DEGREE

The general elementary and kindergarten-primary credentials are granted with the A.B. degree in teacher education. One major in Education, in addition to 45 units in general education courses, and one teaching minor are required for either credential and the degree. Curricular outlines for these credentials may be obtained from the Coordinator of Elementary Education.

Summary of unit requirements:

| | *Units* |
|---|---|
| General education | 45 |
| Major in education | 39–42 |
| Additional units, including minor and pattern requirements for the credential | 40–41 |
| Total number of units required for graduation | 124 |

### Major for the General Elementary Credential

The major consists of 39 upper division units to include the following courses: Education 102A-102B (6 units); Education 147 (10 units); Education 148 (12 units); Education 115A (2 units); Education 116 (7 units); and Health Education 151 (2 units).

Lower division background courses for the credential include: Social science to include regional geography (9 units); natural science to include physical geography (12 units); literature, philosophy; and the arts to include courses in music fundamentals, music methods, arts and crafts, and design (12-15 units); physical education to include games and activities for the elementary school (2½ units).

### Major for the Kindergarten-Primary Credential

The major consists of 42 upper division units to include the following courses: Education 102A-102B (6 units); Education 147 (10 units); Education 148 (12 units); Education 116 (6 units); Education 146 (4 units); Education 115A (2 units); and Health Education 151 (2 units).

Lower division background courses for the credential include: Social science (9 units); natural science (12 units); literature, philosophy, and the arts to include courses in music fundamentals, music methods, piano, arts and crafts, and design (13-15 units); physical education to include games and activities for the elementary school (2½ units).

### Minor

A teaching minor for the general elementary and kindergarten-primary credentials consists of a minimum of 15 units in one field, six units of which must be in courses carrying upper division credit. Minors are offered in the following fields.

English
Foreign Languages
General Science
Industrial Arts
Mathematics
Physical Education
Social Science
Speech Arts

The minor in English must include three units in American literature. The minor in foreign languages may be in one or more of the foreign language fields. The minor in general science must be made up of courses selected from the general secondary credential minor in life science and general science or physical science and general science. The minor in social science must include six upper division units in history or six upper division units in geography and further work in either lower or upper division selected from anthropology, economics, geography, history, political science, or sociology.

A second minor, though not required, may be chosen from art, health education, home economics, music, or recreation.

Students taking the general elementary or kindergarten-primary credential in combination with a special secondary credential may use the special secondary major for the minor in the elementary or kindergarten-primary fields.

# GENERAL JUNIOR HIGH SCHOOL CREDENTIAL WITH THE BACHELOR OF ARTS DEGREE

The general junior high school credential is offered to students with minors in home economics or industrial arts or to students who wish to take this credential in combination with a general elementary, kindergarten-primary, or special secondary credential. The general junior high school credential is granted with the A.B. degree in teacher education.

One teaching major and one teaching minor, in addition to 45 units in general education courses, are required of all students taking this credential. Students not taking this credential in combination with another credential are required to complete 24 units in professional education courses and a minor in home economics or industrial arts. Students taking this credential in combination with another credential should refer to the section of the bulletin entitled: Combination of Credentials.

## Teaching Majors and Minors

Teaching majors and teaching minors are offered in the following fields:

| *Teaching Majors* | *Teaching Minors* |
|---|---|
| English | Home Economics |
| Foreign Languages | Industrial Arts |
| General Science | or |
| Mathematics | The special secondary field for the combination credentials |
| Social Science | |

Summary of unit requirements:

| | *Units* |
|---|---|
| General education | 45 |
| Teaching major (minimum requirements) | 24 |
| Teaching minor | 15 |
| Professional courses in education | 24 |
| Electives | 16 |
| Total number of units required for graduation | 124 |

## Teaching Major

A *teaching major* consists of 24 to 33 units as specified below. Courses in the major are in addition to the 45 units required in general education courses, unless otherwise indicated.

A *teaching major in English* shall consist of six units in a lower division year-course, and 18 units in English courses carrying upper division credit, including three units in American literature and three units in Shakespeare. Recommended as part of the major: English 192.

A *teaching major in foreign languages* may include one or more of the foreign languages for a minimum of 24 units, 18 units of which must be in courses carrying upper division credit.

A *teaching major in general science* shall consist of a minimum of 33 units, at least 12 units of which must be in courses carrying upper division credit. Nine units may be applied toward general education requirements. The lower division courses must cover all of the following areas of science: astronomy, botany, chemistry, geology, physics, and zoology. Lower division minimum requirements: Biology 3 and 4, and Physical Science 1 and 2, or equivalent courses. Upper division requirements: Botany 119 or Zoology 119, and Physical Science 150 or Physics 148, plus at least one more course in each of life and physical sciences for a minimum of 12 upper division units. These elective courses, Physical Science 10, Physics 22, Physiology 1C, Zoology 20, Botany 150, Physical Science 110, Zoology 160 and 165 and the alternate courses in upper division above are available to students who take only the minimum lower division courses. Electives may be used to complete the required minimum of 33 units. A student electing this major must have one year each of high school algebra and geometry, or equivalent.

A *teaching major in mathematics* shall consist of a minimum of 24 units, at least 18 units of which must be in courses carrying upper division credit.

A *teaching major in social science* shall consist of a minimum of 24 units, at least 18 units of which must be in courses carrying upper division credit. There shall be a concentration of 12 units, at least six units of which must be in courses carrying upper division credit, selected from one of the following fields: anthropology, economics, geography, history, political science, or sociology. A year-course in American history must be included in the lower or upper division.

### Teaching Minors

A *teaching minor* consists of a minimum of 15 units, six units of which must be in courses carrying upper division credit. Teaching minors are offered in home economics or industrial arts.

A *teaching minor in home economics* consists of a minimum of 15 units to include Home Economics 5 or 62 and 10 or 11 in the lower division; and Home Economics 150 and 170 in the upper division. Three additional units should be chosen in consultation with the adviser in home economics.

A *teaching minor in industrial arts* consists of a minimum of 15 units, six units of which must be in courses carrying upper division credit. Required: Industrial Arts 2 or 21 and 121, and at least one lower division and one upper division course in two of the following areas: woodworking, metalworking, and electricity.

### Professional Courses in Education

Professional courses include 24 units in the following: Education 184A-184B-184C, 100B (methods in the major and minor fields), 116; plus Health Education 151.

## SPECIAL SECONDARY SCHOOL CREDENTIAL WITH THE BACHELOR OF ARTS DEGREE

The special secondary school credential is granted with the A.B. degree in teacher education in the following fields: art, business education, music, physical education, and speech arts. Majors in these fields are in addition to 45 units in general education courses. Professional courses in education are also required. Certain of these credentials require, in addition, a teaching minor in an academic field. For a statement of requirements in the major and in professional education, refer to the credentials below.

Summary of unit requirements:

| | *Units* |
|---|---|
| General education | 45 |
| Major for the credential | 39–58 |
| Professional courses in education | 22–26 |
| Minor, if required, and electives | 0–18 |
| Total number of units required for graduation | 124 |

## TEACHING MINORS FOR THE SPECIAL SECONDARY CREDENTIAL

A teaching minor is required for the special secondary credential in men's physical education. A minor is optional for the other special secondary credentials. The minor consists of a minimum of 15 units, or maximum of 22, six units of which must be in courses carrying upper division credit. Courses in the minor may include general education courses. Teaching minors are offered in the following fields:

English
Foreign languages
General science
Health education
Home economics
Industrial arts
Mathematics
Recreation
Social science

The following teaching minors include certain requirements:

*English.* Nine upper division units in English are required, including three units in American literature. Students who plan later to secure a general secondary credential with a minor in English must follow the program outlined under the general secondary credential.

*Foreign languages:* The minor must be in one foreign language field.

*General science:* Courses in the minor are to be selected from the minors for the general secondary credential in life science and general science, or physical science and general science.

*Health education:* The minor must include Health Education 65, 90, 152, 145 or 153, 199, and Physical Education 151.

*Home economics:* The minor must include Home Economics 5 or 62 and 10 or 11 in the lower division; and Home Economics 150 and 170 in the upper division. Three additional units should be chosen in consultation with the adviser in home economics.

*Industrial arts:* The minor must include Industrial Arts 2 or 21 and 121 and at least one lower division and one upper division course in two of the following areas: woodworking, metalworking, or electricity.

*Mathematics:* See general statement above.

*Recreation:* Lower division requirements: Two units of physical education activity courses, Physical Education 53, and two units chosen from Art 61B, or fields of dance, drama, or music. Upper division requirements: Recreation 165, 170A-170B, and 184A or 184B. Recommended: Physical Education 151. Consultation with the chairman of the Recreation Department is advised.

*Social science:* The minor must include courses selected from anthropology, economics, geography, history, political science, or sociology. Six units must be in a year-course sequence and six units are required in American history or three units in American history and three units in political science.

## SPECIAL SECONDARY CREDENTIAL IN ART

The teaching major in art for the special secondary credential consists of 42-44 units to include the following courses: Lower division: in general education: Aesthetics 5 or 51 and 50 (4 units); in the major: Art A (or high school equivalent), Art B, 6A-6B, 14A, 61A-61B, and six to eight units of art electives (18-20 units). Upper division: Aesthetics 150, Art 106A, 112A, 116A, 119A, 194A, 195, Speech Arts 140A, and five units of art electives (22 units).

Professional courses in education consist of 22 upper division units to include the following courses: Education 184A-184B-184C, 116, 119, and 100B-A. Health Education 151 (2 units) is also required.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors above.

## SPECIAL SECONDARY CREDENTIAL IN BUSINESS EDUCATION

The major in business education consists of 54-56 units to include the following: Lower division: Business 1A-1B, 8, 14A-14B, 18A-18B (21 units); plus the requirements in one of the following sub-fields: (1) Accounting: Nine units selected from Business 2, 21, 24, 25, 27; (2) Accounting-Secretarial: Business 5A-5B (if student has credit for Business 1A-1B or 5A-5B, other courses may be substituted in consultation with adviser); (3) Merchandising: Business 24, 25, 27; (4) Secretarial: Business 5A-5B. (If student has credit for Business 1A-1B or 5A-5B, other courses may be substituted in consultation with adviser).

Upper division: Business 103A, 105A-105B, 108, 190 (15 units); plus the requirements in one of the following sub-fields: (1) Accounting: Business 121, 160A, and 164A; (2) Accounting-Secretarial: Business 121; and 160A and 164A, or 113A-113B; (3) Merchandising: Business 121 and six units selected from Business 185, 186, 187A-187B, Art 107; (4) Secretarial: Business 113A-113B.

Professional courses in education consist of 22 upper division units to include the following courses: Education 184A-184B-184C, 116, 100B-T, and one of the following: Education 100B-B, 100B-ME, or 100B-S. Health Education 151 (2 units) is also required.

In addition to the requirements stated above, the student must present satisfactory evidence of one-half year, or 1,000 hours of approved experience in the field named in the credential.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors above.

## SPECIAL SECONDARY CREDENTIAL IN MUSIC

Students are referred to the opening statement and to the general basic requirements given in the section on announcement of courses under music. The student planning to receive this credential is held to the general basic music requirements. Students should consult with the chairman of the music department before registering and plan their course in view of individual variations in background and needs. Before admission to the directed teaching program may be granted, credential candidates must have completed Music 146A-146B and must have passed the minimum State credential requirements in voice and piano, with or without credit, which are as follows:

(a) Piano: Ability (1) to play a Bach two-part invention; (2) to play an artistic accompaniment; (3) to play at sight four-part hymns.
(b) Voice: Ability (1) to sing at least one song representative of each of the following periods of vocal literature: Classic, Romantic, Modern; (2) to sing at sight any part of a four-part hymn.

Students whose background in piano is inadequate for these requirements must register in their first semester for appropriate private or class instruction, with or without credit. Students with insufficient background in voice must register for voice instruction no later than the third semester.

Specific requirements for the major: Lower division: Music 8A-8B, 10A-B-C-D (may be omitted in part or in full upon evidence of satisfactory piano technique), 51A-51B, 58A-58B; four units selected from music courses numbered 70 to 87 (see activity requirements stated in general basic requirements for all music majors), 15A-15B, 20A-20B, 25A-25B, 30A-30B, and 35 (29-33 units). Upper division: Music 101A-101B, 108A-108B, 109A, 146A-B-C; four units chosen from Music 111, 112, 116, 117, 121, 122, 126, 127, 131, 132, or 150A-B-C; four units chosen from courses numbered 170 to 187 (see activity requirements stated in the general basic requirements for all music majors) (25 units). Eight units in music activity courses may be applied toward general education requirements in Literature, Philosophy, and the Arts.

Professional courses in education consist of 24 upper division units to include the following courses: Education 184A-184B-184C, 116, 117A, 145A, and 100B-Mu. Health Education 151 (2 units) is also required.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors for the special secondary credential listed above.

## SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (MEN)

The major in physical education consists of 42 units to include the following: Lower division: Physical Education 53, 63, 64, 72, Health Education 65 (11 units); and Physiology 1A and Zoology 8 (6 units). Upper division: Physical Education 141, 142, 145, 146, 151, 155, 168, 170A or 170B, 177, 190, and two units of physical education electives (25 units).

Professional courses in education consist of 22 upper division units to include the following courses: Education 184A-184B-184C, 116, 100B-PE, and 100B in the minor field. Health Education 151 (2 units) is also required.

A teaching minor is required. Refer to the teaching minors for the special secondary credential listed above.

## SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (WOMEN)

The major in physical education consists of 38 units to include the following: Lower division: Physical Education 4, 5, 6, 12A-12B, 53, 72 (8 units); Physiology 1A or Zoology 20, and Zoology 8 (6 units). Pattern requirements for this credential also include the following courses: Physical Education 1A, 2A-2B, and 3A-3B. Upper division: Physical Education 155, 156A-156B, 160, 161, 164A-164B, 168, 170B, 185 and 190 (24 units).

Professional courses in education consist of 20 upper division units to include the following courses: Education 184A-184B-184C, 116, and 100B-PE. Health Education 151 (2 units) is also required.

A teaching minor is not required.

## SPECIAL SECONDARY CREDENTIAL IN SPEECH ARTS

The major in speech arts consists of 45 units to include the following: Lower division: Speech Arts 4, 11A, 55A or 55B, 56A, 60A, 81 and three units in speech electives (21 units). Upper division: Speech Arts 150, 159, 176 or 179A; three units selected from 162, 191, or 192A; nine units selected from 108, 118, 140, 154A, 154B, 155, 182, or 183; and three units selected from upper division courses in English literature.

Professional courses in education consist of 20 upper division units to include the following courses: Education 184A-184B-184C, 116, and 100B-SA. Health Education 151 (2 units) is also required.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors for the special secondary credential listed above.

## SPECIAL SECONDARY CREDENTIAL IN CORRECTION OF SPEECH DEFECTS

This credential is granted only to students who can verify two years of successful teaching experience or four semester hours of superior student teaching completed in an approved teacher education institution and who hold a valid California teacher's certificate, credential, or life diploma of elementary or secondary school grade. Such students must show credit in the following subjects:

| **Lower Division** | *Units* |
|---|---|
| Psychology 1, General | 3 |
| Speech Arts 4, Extemporaneous Speaking, or equivalent | 3 |
| Speech Arts 11A or 11B, Interpretation | 3 |
| Speech Arts electives | 6 |
| **Upper Division** | |
| Speech Arts 150, Phonetics | 3 |
| Speech Arts 221, Articulatory Problems of Speech or Education 176, Problems of Speech Correction and Articulation | 3 |
| Speech Arts 179A-179B or Education 179A-179B, Nervous Speech Disorders | 6 |
| Psychology 131, Foundations of Personality | 2 |
| One hundred supervised hours of teaching on elementary level in speech correction | 3 |

## SPECIAL SECONDARY CREDENTIAL FOR TEACHING THE MENTALLY RETARDED CHILD

An applicant for the special secondary credential for teaching the mentally retarded child must have completed the following minimum requirements:

1. Possession of a valid kindergarten-primary, general elementary, junior high school, or general secondary credential.
2. Completion of 18 semester hours of professional work selected from the following fields:
    a. Required group: Education 102B, 102C or 184B; 181; 182; Art 61A or 161A; and three units of directed teaching of the mentally retarded.
    b. Additional work to complete the required total of 18 semester hours selected from any of the following electives: Education 176, 144, Psychology 132, 150, or 151.
3. The 18-unit requirement will be reduced 4 units for each year of verified, successful experience in teaching special classes for mentally retarded children, the total not to exceed 12 units.
4. At least six semester units of the 18 required must have been completed within five years of the time application is made for the credential.
5. Twelve units of work must have been completed at this college.

## HEALTH AND DEVELOPMENT CREDENTIAL

This credential is offered for school nurses only. Requirements for this credential include:

1. Possession of a valid license issued by the official California State board or agency in charge of this profession in California.
2. Possession of the Public Health Nurse certificate.
3. The completion of six semester units of work including courses in:
    a. Educational Psychology (Education 130)
    b. Administration of the School Health Program (Health Education 153)
    c. Social case work, or rural education, or child hygiene (Health Education 151)

Pattern of work to be approved by adviser appointed by the Chairman of the Department of Education.

## SCHOOL PSYCHOLOGIST CREDENTIAL

Each applicant for recommendation for the school psychologist credential shall have completed the following minimum requirements:

1. Possession of a valid general elementary or general secondary credential.
2. One year of successful teaching experience.
3. Possession of a master's degree in psychology or educational psychology.
4. Each applicant must complete the following course requirements:

| | *Units* |
|---|---|
| A. Child development, mental hygiene, and counseling and guidance, including interviewing: | |
| Education 102B, Child Growth and Development, or Psychology 106, Development Psychology | 3 |
| Psychology 132, Personality Adjustment | 2 |
| Psychology 152, Introduction to Methods of Counseling or Education 233, Guidance Counseling Techniques | 3 |
| B. Psychology and education of exceptional children, social case practice including field work and clinical psychology: | |
| Education 181, Exceptional Children | 3 |
| Sociology 230, Principles of Social Case Work | 3 |
| Psychology 151, Introduction to Clinical Appraisal or Psychology 211, Advanced Clinical Psychology | 3 |
| C. Educational psychology and educational measurements including field work and elementary statistics: | |
| Psychology 130, Educational Psychology | 2 |
| Education 102A, Measurement and Evaluation in Elementary Education, Education 102D, Measurement and Evaluation in Secondary Education, or Education 184C, The Teaching Process | 2-4 |
| Psychology 104A, Statistical Methods in Psychology | 3 |
| D. Individual and group mental tests including field work: | |
| Psychology 105A, Introduction to Psychological Testing | 3 |
| Psychology 105B, Individual Mental Testing | 3 |
| Psychology 205, Advanced Mental Testing | 3 |
| E. Remedial instruction including laboratory or classroom practice: | |
| Education 144, Diagnosis and Remedial Treatment of Difficulties in Reading | 3 |
| Education 176, Problems of Speech Correction and Articulation or Education, 179A, Nervous Speech Disorders | 3 |

These courses include laboratory practice.

### SCHOOL PSYCHOMETRIST CREDENTIAL

An applicant for the school psychometrist credential must have completed the following requirements:

1. Possession of a California general teaching credential (General Elementary, Junior High School, or General Secondary) or a four-year college course with a bachelor's degree.

2. Admission to teacher education by all undergraduate students or by graduate students who do not hold a California teaching credential. A special examining committee of members of both the Departments of Education and Psychology is established to interview applicants.

3. As a part of the undergraduate or graduate program the applicant must have completed 18 semester units of training distributed approximately as follows and approved by the credential adviser:

   A. At least six units selected from the following areas with one course in each area: (1) Education 102A or 102D or 184C; (2) Education 102B or 102C; (3) Education 130. Education 184B will meet requirements in both area 2 and 3.

   B. Six units as follows: Education 181 and Psychology 151.

   C. Six units as follows: Psychology 105A and Psychology 105B.

## CURRICULA LEADING TO THE GENERAL SECONDARY SCHOOL CREDENTIAL

### INFORMATION CONCERNING THE GENERAL SECONDARY SCHOOL CREDENTIAL

A candidate for this credential must complete the requirements for the bachelor's degree from an accredited institution with a major and a minor commonly taught in the secondary schools of California. Admission to candidacy for this credential should be sought during the second semester of the sophomore year or immediately upon admission to San Diego State College with advanced or graduate status. For admission requirements, refer to the section entitled: Admission to Teacher Education.

Students desiring a major for which San Diego State College is authorized should complete a program leading to the A.B. or B.S. degree at the end of four years and the General Secondary Credential upon completion of the graduate year requirements outlined on the following pages.

Students desiring a major in art, business education, music, physical education or speech arts may complete the requirements for the special secondary credential simultaneously with the bachelor's degree; then continue with the graduate program. For further details regarding these majors, refer to these credentials.

Any person desiring the General Secondary Credential should consult with the Coordinator of Secondary Education during his first semester of attendance at San Diego State College.

### RECOMMENDED PROGRAM FOR THE GENERAL SECONDARY SCHOOL CREDENTIAL

1. The following courses should be completed before receiving the bachelor's degree: Health Education 151 (may be taken any semester); Education 184A and 184B (should be taken consecutively). Those persons changing from another vocational objective to education during the senior year may take Education 184A and 184B concurrently by special permission of the Coordinator of Secondary Education, following admission to Teacher Education and a check of the student's qualifications.

| | *Units* |
|---|---|
| Health Education 151, Health Education for Teachers | 2 |
| Education 184A, The Secondary School | 4 |
| Education 184B, Development and Learning | 4 |

2. After completion of requirements in (1) above, the following courses may be taken either before or after receiving the bachelor's degree; however, they should be taken concurrently with the first directed teaching assignment unless the student has equivalent teaching experience.

| | *Units* |
|---|---|
| Education 184C, The Teaching Process | 4 |
| Education 116 or 316, Directed Teaching (or equivalent) | 3 |
| Education 100B (methods in field of directed teaching assignment) | 2–4 |

3. The graduate work must consist of San Diego State College's standard year of work, 24 to 30 semester units of upper division or graduate work, including the following specific requirements:

(a) At least 12-15 semester units must be completed at San Diego State College.

(b) At least one course of graduate level work (200 number) in the major field. Most departments require two courses.

(c) At least six upper division or graduate semester units in fields outside of education.

(d) Enough units to complete at least a 21 semester unit minor, with a minimum of six semester units of upper division credit in the minor subject area.

For a statement of requirements in the teaching major and minor fields, refer to these majors and minors below.

4. Professional Education during the graduate year: Completion of the courses listed in (1) and (2) above and the following:

| | *Units* |
|---|---|
| Education 100B (in the field of the second directed teaching assignment) if not taken under (2) above | 2 |
| Education 230, Guidance Problems in Secondary Education | 3 |
| Education 250, Curricular Problems in Secondary Education | 3 |
| Education 316, Directed Teaching in both major and minor fields, or equivalent teaching experience | 3–6 |

## MAJORS AND MINORS FOR THE GENERAL SECONDARY CREDENTIAL

The following pages outline tentative programs for the majors and minors for which San Diego State College is authorized to recommend for the General Secondary Credential. Every candidate for the general secondary credential must have a program approved in writing by the departmental representative in the major teaching field and in education as part of admission to the teacher education program.

Persons with broad fields majors (Language Arts, Life Science and General Science, Physical Science and General Science, Romance Languages, or Social Science) cannot take a minor within the area of their major.

*Teaching Majors*

Art
Business Education
English
French
Health Education
Language Arts
Life Science and General Science
Mathematics
Music
Physical Education (Men)
Physical Education (Women)
Physical Science and General Science
Psychology
Romance Languages
Social Science
Spanish
Speech Arts

*Teaching Minors*

Art
Business Education
Economics
English
French
Health Education
History
Home Economics
Industrial Arts
Life Science and General Science
Mathematics
Music
Physical Education (Men)
Physical Education (Women)
Physical Science and General Science
Recreation
Spanish
Speech Arts

## Outline of Requirements

### Major in Art

The requirements for the A.B. degree and the special secondary credential in art should be completed simultaneously. (Students transferring from another institution with the A.B. degree and a major in art should consult with the departmental representative for special program planning.) Refer to the special secondary credential in art. After the above requirements have been met, and the candidate has been accepted by the art staff for graduate work in art, the candidate for the general secondary credential shall complete a graduate year including the following courses in his major:

| *Graduate Year* | *Units* |
|---|---|
| Art 200A-200B, Special Problems in Art | 4 |

### Minor in Art

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Art A-B, Drawing and Composition | 2–4 |
| Art 6A-6B, Design | 4 |
| Art elective (Art 14A, Lettering, recommended) | 3–5 |
| Aesthetics 50, Appreciation and History of Art | 2 |
| Aesthetics 5, Art Orientation, or Art 51, Survey of Mexican Art | 2 |
| *Upper Division* | |
| Aesthetics 150, Appreciation and History of Art | 2 |
| Art electives | 4 |

### Major in Business Education

The requirements for the A.B. degree and the special secondary credential in Business Education should be completed simultaneously. Refer to the special secondary credential in Business Education. After the above requirements have been met, the candidate for the general secondary credential shall complete a graduate year including the following courses in his major:

*Graduate Year*

Select four units from the following:

| | |
|---|---|
| Business 200, Readings in Current Literature in Business Education | 2 |
| Business 203, Office Management | 2 |
| Business 213, Problems in Business Education | 2 |
| Business 221, Basic Business Education | 2 |
| Business 223, Problems of Distributive Business | 2 |
| Business 233, Administration and Supervision of Business Education | 2 |
| Business 260, Advanced Problem Analysis (Accounting) | 2 |

### Minor in Business Education

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Business 1A-1B, Typewriting | 6 |
| Business 14A-14B, Principles of Accounting | 6 |
| *Upper Division* | |
| Nine upper division units should be selected in consultation with adviser in business education | 9 |

### Minor in Economics (Not available to Social Science majors)

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Economics 1A-1B, Principles of Economics | 6 |
| A year course in another social science area | 6 |
| *Upper Division* | |
| Economics 100A, Intermediate Economic Thought | 3 |
| Economics electives | 6 |

**Major in English**

*Lower Division*

| | Units |
|---|---|
| One year-course from lower division English electives | 6 |
| Lower division English electives | 6 |

*Upper Division*

| | |
|---|---|
| Upper Division English courses selected under the supervision of the departmental representative | 24 |

*Graduate Year*

| | |
|---|---|
| One of the graduate seminars | 2 |
| English 192, The English Language (if not taken as an undergraduate) or 191, 195, or an additional seminar | 2–3 |

**Minor in English** (Not available to Language Arts majors)

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| English 1 or 41, Freshman Composition | 3 |
| A year course chosen from: English 50A-50B, 52A-52B, 56A-56B, or 60A-60B | 6 |

*Upper Division*

Select one course from each of the following areas:

| | |
|---|---|
| Nineteenth Century English Literature: select from English 119A, 119B, 126A, 126B, or 143B | 3 |
| Shakespeare: select from English 117A or 117B | 3 |
| American Literature: select from English 131, 132, 133, or 134 | 3 |
| Language: English 192 | 3 |

**Major in French**

*Lower Division*

| | |
|---|---|
| French 1, 2, 3, 4, 5, 6, or equivalents | 16 |
| Spanish 1, 2, or German 1, 2, or Latin 1, 2, or their equivalents | 6 |
| History 4A-4B (recommended) | |

Six units from courses 1, 2, 3, 4 in Spanish, German, or Latin may be applied toward general education requirements.

*Upper Division*

| | |
|---|---|
| French 101A-101B, Conversation and Composition | 6 |
| French 198, Comprehensive Reading and Survey | 3 |
| Upper division courses in French with a maximum of six units which may be selected from related fields with the approval of the departmental representative | 15 |

*Graduate Year*

| | |
|---|---|
| French 214, Contemporary French Literature | 2 |
| French 220, Explication de Textes | 2 |

**Minor in French** (Not available to Romance Languages majors)

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| French 1, 2, 3, 4, 5, 6, or equivalents | 16 |
| History 4A-4B (recommended) | |

*Upper Division*

| | |
|---|---|
| French 101A-101B, Conversation and Composition | 6 |

**Major in Health Education**

This teaching major may be used as a major for the A.B. degree if the student has been admitted to candidacy for the general secondary credential and has completed at least eight units in professional education courses, including Education 184A-184B, by the date of degree candidacy. The major is designed around the general major, with health education as the field of concentration.

*Lower Division*

| | |
|---|---|
| Health Education 65, Community Health | 3 |
| Health Education 90, Physiology of Reproduction | 1 |
| Home Economics 61A, Nutrition | 2 |
| Physiology 1A, Human Physiology | 3 |
| Zoology 8, Human Anatomy | 3 |

*Upper Division*

36 upper division units to include the following:

| | *Units* |
|---|---|
| Health Education 145, Safety Education and Accident Prevention | 3 |
| Health Education 151, Health Education for Teachers | 2 |
| Health Education 152, Health Education Programs | 3 |
| Health Education 153, Administration of the School Health Program | 3 |
| Health Education 199, Special Study in Health Education | 3–6 |
| Physical Education 151, Instructor's Course in First Aid | 2 |
| Sociology 135, Marriage and the Family | 3 |
| Psychology 131, Foundations of Personality | 2 |
| Psychology 132, Personality Adjustment | 2 |
| Bacteriology 101, General Bacteriology | 4 |
| Six to nine upper division units selected from one of the teaching major or minor fields for the general secondary credential, selected with approval of the departmental adviser | 6–9 |

### Minor in Health Education

A minimum of 21 semester units required.

Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

*Lower Division*

| | |
|---|---|
| Health Education 21, Principles of Healthful Living | 2 |
| Health Education 65, Community Health | 3 |
| Health Education 90, Physiology of Reproduction | 1 |

*Upper Division*

| | |
|---|---|
| Health Education 145, Safety Education and Accident Prevention | 3 |
| Health Education 151, Health Education for Teachers | 2 |
| Health Education 152, Health Education Programs | 3 |
| Health Education 153, Administration of School Health Program | 3 |
| Health Education 199, Special Study in Health | 2–3 |
| Physical Education 151, Instructor's Course in First Aid | 2 |

### Minor in History (Not available to Social Science majors)

A minimum of 21 semester units required. A year course in United States History must be included.

*Lower Division*

| | |
|---|---|
| History 4A-4B, Modern Europe, or 8A-8B, The Americas, or 9A-9B, Pacific Ocean Area, or 17A-17B, American Civilization | 6 |
| Electives chosen from anthropology, economics, geography (except Geography 1 or 3), political science, sociology | 6 |
| Additional social science electives | 0–3 |

*Upper Division*

| | |
|---|---|
| History electives | 6–9 |

### Minor in Home Economics

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| Home Economics 5, Foods | 3 |
| Home Economics 10, Clothing Fundamentals, or 11, Advanced Clothing | 3 |
| Electives in Home Economics | 3–6 |

*Upper Division*

| | |
|---|---|
| Home Economics 105, Family Meals | 3 |
| Home Economics 150, Home Management | 3 |
| Home Economics 170, Child Care and Development | 3 |
| Electives in Home Economics | 3–6 |

Electives for enrichment—see department chairman.

### Minor in Industrial Arts

A minimum of 21 semester units required.

| | | *Units* |
|---|---|---|
| *Lower Division* | | |
| Industrial Arts 2, Mechanical Drawing | | 3 |
| Select at least three courses from the following: | | 9 |
| Industrial Arts 31, Elements of Metalwork | 3 | |
| Industrial Arts 32, Elements of Machine Operation | 3 | |
| Industrial Arts 51, Elements of Woodwork | 3 | |
| Industrial Arts 61, Elements of Electricity | 3 | |
| Industrial Arts 71, Elements of Transportation Machinery | 3 | |
| *Upper Division* | | |
| Industrial Arts 121, Advanced Mechanical Drawing | | 3 |
| Select appropriate upper division electives | | 6 |

### Major in Language Arts

This major requires 46 units to be taken in the fields of composition, dramatics, journalism, language, literature, radio or motion pictures, and speech arts. Education courses to be taken with this major include the standard program for all general secondary credentials plus Education 154, Reading in the Secondary School, and Education 100B in both English and speech arts. A methods course in a teaching minor is also required for the credential. Students using this major for the A.B. degree must complete a minimum of eight units in education courses by date of degree candidacy.

| | |
|---|---|
| *Lower Division* | |
| English 50A-50B, or 52A-52B, or 60A-60B<br>(or two upper division courses may be substituted, selection to be made from English 116A-116B, or 118A-118B, or 119A-119B, or 120A-120B, or 126A-126B, or 143A-143B) | 6 |
| Journalism 51A | 3 |
| Speech Arts 60A, or 60B, or 55A, or 55B | 3 |
| Speech Arts 81 | 3 |
| *Upper Division* | |
| English 192 | 3 |
| English 106 or 191 | 3 |
| English 131, or 132, or 133, or 134 | 3 |
| English 117A, or 117B, or 152A, or 152B | 3 |
| Journalism 152 | 3 |
| Speech Arts 108, 159, and 176 | 9 |
| Speech Arts 191, or 192A, or 192B | 3 |
| If lower division English sequence is taken in American Literature, the upper division course work in literature should be taken in other areas. | |
| *Graduate Year* | |
| One 200 numbered course in speech arts | 2 |
| One 200 numbered course in English | 2 |

### Major in Life Science and General Science

| | |
|---|---|
| *Lower Division* | |
| Zoology 1A-1B, General | 8 |
| Botany 2A-2B, General, or 1, Introduction | 4–8 |
| Zoology 20, Human Anatomy and Physiology, or Physiology 1C, Human Physiology | 2–3 |
| Chemistry 2A-2B | 6 |
| Physics 2A-2B | 6 |

Geology 2, General, Astronomy 1, Descriptive, and Physics 3A-3B, Physical Measurements, recommended.

12 units in natural science courses may be applied toward general education requirements.

| *Upper Division* | *Units* |
|---|---|
| Zoology 119, Field Zoology | 4 |
| Botany 114, Plant Taxonomy, or Botany 119, Field Botany | 3–4 |
| Bacteriology 101, General Bacteriology | 4 |
| Botany 155, Genetics, or Zoology 165, Human Heredity | 2 |
| Zoology 160, Evolution | 2 |
| Zoology 150, Readings in Biology | 2 |
| Two courses chosen from the following: | |
| Zoology 110, 112, 113, 115, 118, 121 | 7–8 |
| *Graduate Year* | |
| Zoology 200, Seminar | 3 |
| Zoology 202, Hydrobiology, or Zoology 213, Advanced Studies in Ornithology | 2 |

## Minor in Life Science and General Science

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Biology 3, Principles, and Biology 4, Plant and Animal Types | 6 |
| Physical Science 1 and 2, Introduction | 6 |
| Physiology 1C, Human Physiology | 2 |
| *Upper Division* | |
| Botany 114, Plant Taxonomy, Botany 119, Field Botany, or Zoology 119, Field Zoology | 3–4 |
| Botany 150, Readings in Biology | 2 |
| Zoology 160, Evolution | 2 |

## Major in Mathematics

| | |
|---|---|
| Mathematics 3A, Analytic Geometry | 3 |
| Mathematics 3B, First Course in Calculus | 3 |
| Mathematics 4A, Second Course in Calculus | 3 |
| Additional mathematics or work in related areas | 3 |

*Suggested courses in related areas:* Astronomy 1, Descriptive Astronomy; Business 2, Mathematics of Finance; Engineering 1A, Plane Surveying; Engineering 21, Descriptive Geometry; Physics 4A, Mechanics of Solids and Fluids; Physics 2A, General.

| | |
|---|---|
| *Upper Division* | |
| At least one course in Algebra | 3 |
| At least one course in Geometry | 3 |
| Mathematics 140A, Mathematical Statistics | 3 |
| Mathematics 117, Intermediate Calculus (unless 4B, Third Course in Calculus taken in lower division) | 3 |
| Mathematics 104, History of Mathematics | 3 |
| Additional upper division units in mathematics or related areas | 9 |
| *Graduate Year* | |
| Four units selected from the following: | |
| Mathematics 201, Concepts of Geometry from an Advanced Point of View | 2 |
| Mathematics 202, Concepts of Algebra from an Advanced Point of View | 2 |
| Mathematics 204, Advanced Work in the History of Mathematics | 2 |
| Mathematics 224, Functions of a Complex Variable | 3 |

## Minor in Mathematics

A minimum of 21 semester units required.

*Lower Division*

| | Units |
|---|---|
| Mathematics D, Trigonometry (or high school equivalent for which pattern credit may be allowed) | 3 |
| Mathematics 3A, Analytic Geometry | 3 |
| Mathematics 3B, First Course in Calculus | 3 |
| One course selected from courses in related areas (See above under teaching major in mathematics) | 3 |

*Upper Division*

| | Units |
|---|---|
| Mathematics 104, History of Mathematics | 3 |
| Mathematics electives | 6 |

## Major in Music

The requirements for the A.B. degree and the special secondary credential in music should be completed simultaneously. Students transferring from another institution with the A.B. degree and a major in music should consult with the departmental representative for special program planning. Refer to the special secondary credential in music. After the above requirements have been met, the candidate for the general secondary credential shall complete a graduate year including 4 units selected from the following courses in his major:

*Graduate Year*

Four units selected from the following:

| | Units |
|---|---|
| Music 200A-200B, Special Problems in Music | 2–2 |
| Music 203, Musicology | 2 |
| Music 206, Composition | 2 |

## Minor in Music

A minimum of 21 semester units required. The student is required to demonstrate vocal or instrumental proficiency before admission to the minor program may be granted. As laboratory experience, the student with music as a minor is required to participate in one music activity each semester (in special cases this requirement may be waived by the Chairman of the Music Department). A maximum of four units of credit from music activities may be used toward the total graduation requirement.

*Lower Division*

| | Units |
|---|---|
| Music 8A-8B, Fundamentals, and Harmony | 6 |
| Music 10A-10B, Piano (may be omitted in part or in full upon demonstration of proficiency) | 2 |
| Music activities chosen from courses numbered 70 to 87 | 2 |
| Selected from the following: Music 15A, 20A, 25A, 30A | 3–5 |

*Upper Division*

| | Units |
|---|---|
| Music 101A, History of Music | 3 |
| Music 146A, Fundamentals of Conducting | 1 |
| Music 146B, Instrumental Conducting, or 146C, Choral Conducting | 1 |
| Music activities chosen from courses numbered 170 to 187 | 2 |
| Selected from the following: Music 111, 112, 116, 117, 121, 122, 126, 127, 131, 132, or 150 | 1 |

## Major in Physical Education for Men

The requirements for the A.B. degree and the special secondary credential in physical education should be completed simultaneously. After the major field requirements for the special secondary credential in physical education have been met, the candidate for the general secondary credential shall complete a graduate year, including two of the following courses in his major:

| | Units |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |
| Physical Education 298, Special Study | 2 |

### Minor in Physical Education for Men

A minimum of 21 semester units required.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | Units |
|---|---|
| *Lower Division* | |
| Physical Education 53, Physical Education in the Elementary Schools | 2 |
| Physical Education 72, Introduction | 2 |
| Electives | 2–4 |
| *Upper Division* | |
| Professional activity courses (should be selected in consultation with departmental representative) | 4 |
| Physical Education 151, Instructor's Course in First Aid | 2 |
| Physical Education 190, Administration of Physical Education in Secondary Schools | 3 |
| Physical Education 170A or 170B Recreational Leadership | 2 |
| Electives | 2–4 |

### Major in Physical Education for Women

The requirements for the A.B. degree and the special secondary credential in physical education should be completed simultaneously. After the major field requirements for the special secondary credential in physical education have been met, the candidate for the general secondary credential shall complete a graduate year including two of the following courses in the major:

| | |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education, and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |
| Physical Education 298, Special Study | 2 |

### Minor in Physical Education for Women

A minimum of 21 semester units required.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | |
|---|---|
| *Lower Division* | |
| Physical Education 1A, Fundamental Skills | ½ |
| Physical Education 2A, Folk Dancing | ½ |
| Physical Education 3A, Modern Dance | ½ |
| Physical Education 4, 5, 6, Team Sports | 1½ |
| Physical Education 53, Physical Education in the Elementary School | 2½ |
| Physical Education electives | 3½–4½ |
| *Upper Division* | |
| Physical Education 156A-156B, Sports Methods | 4 |
| Physical Education 161, Folk Dancing Materials and Advanced Techniques | 2 |
| Electives selected from Physical Education 190, 170B, 164A-164B | 5–6 |

### Major in Physical Science and General Science

To obtain a teaching major in physical science and general science for the general secondary credential a student obtaining the A.B. or B.S. degree in chemistry or physics, or the A.B. degree in physical science, must include in his program the following courses, which will also satisfy the natural science requirements for general education.

| | |
|---|---|
| *Lower Division* | |
| Astronomy 1, Descriptive | 3 |
| Biology 3 and 4, General, and Plant and Animal Life | 6 |
| Geology 2 or 1A, General or Physical | 3–4 |

Recommended electives: Astronomy 9, Geography 3, Geology 3; general education courses in literature, philosophy, and the arts: Physical Science 10, Industrial Arts 5 and/or 6.

*Upper Division* *Units*

Same as for the major in chemistry, physics, or physical science.

Recommended electives, if not included as part of the major: Botany 119, Chemistry 101A, Physics 107, 158, Zoology 119, and Geography 145 (a general education course in social science).

*Graduate Year*

Select four units from the following:

| | Units |
|---|---|
| Chemistry 200, Seminar | 2–4 |
| Physics 200, Seminar | 2–4 |

### Minor in Physical Science and General Science

This minor consists of 26 units in courses specified below.

| | Units |
|---|---|
| Astronomy 1, Descriptive Astronomy | 3 |
| Biology 3 and 4, Principles, and Plant and Animal Types | 6 |
| Chemistry 2A-2B, or 1A-1B, Fundamentals, or General | 6–10 |
| Geology 2 or 1A, General, or Physical | 3–4 |
| Physics 2A-2B and 3A-3B, or 4A-4B-4C, General, or Principles | 8–12 |

The following courses are recommended as electives: Astronomy 9, Geology 3, Chemistry 101A, Geography 3, Geography 145, Physical Science 150, Physics 148, Botany 119, or Zoology 119, Physical Science 10, Industrial Arts 5 and 6.

### Major in Psychology

This major can be used for a general secondary credential only if the candidate completes *two* teaching minors.

*Lower Division*

| | Units |
|---|---|
| Psychology 5 and 6, Principles | 6 |

*Upper Division*

| | Units |
|---|---|
| Psychology 104A, Statistical Methods | 3 |
| Psychology 105B, Individual Mental Testing | 3 |
| Psychology 131, Foundations of Personality | 2 |
| Psychology 132, Personality Adjustment | 2 |
| Psychology 151, Introduction to Clinical Appraisal | 3 |
| Psychology 160A, Experimental Psychology | 3 |
| Electives to be selected with approval of the departmental representative | 8 |

*Graduate Year*

| | Units |
|---|---|
| Psychology 201, Seminar in Psychology | 2 |
| Education 230, Guidance Problems in Secondary Education | 3 |

### Minor in Recreation

A minimum of 21 semester units required.

Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

*Lower Division*

| | Units |
|---|---|
| Physical Education activities | 2 |
| Physical Education 53, Physical Education in Elementary Schools | 2 |
| Electives selected from Art 61B, Crafts, or from the fields of dance, drama or music | 2–4 |

*Upper Division*

| | Units |
|---|---|
| Physical Education 151, Instructor's Course in First Aid | 2 |
| Recreation 165, Administration of Community Recreation | 3 |
| Recreation 170A-170B, Recreational Leadership | 2–4 |
| Recreation 184A-184B, Field Work in Recreation | 3–6 |
| Recreation 199, Special Study in Recreation | 1–6 |

### Major in Romance Languages

*Lower Division*

| | Units |
|---|---|
| Spanish 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| French 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| History 4A-4B, or 8A-8B (recommended) | |

Six units from courses 1, 2, 3, 4 in French or Spanish may be applied toward general education requirements.

| *Upper Division* | *Units* |
|---|---|
| Spanish 101A-101B, Conversation and Composition | 6 |
| French 101A-101B, Conversation and Composition | 6 |
| Spanish 198 or French 198, Comprehensive Reading and Survey Course | 3 |
| Courses in Spanish literature, French literature or Spanish-American literature, selected with the approval of the departmental representative | 9 |

NOTE: At least nine units of upper division courses must be taken in each language.

*Graduate Year*

Any two of the following courses:

| | |
|---|---|
| French 214, Contemporary French Literature | 2 |
| French 220, Explication de Textes | 2 |
| Spanish 201, Old Spanish | 2 |
| Spanish 204, Seminar in Spanish-American Literature | 2 |

### Major in Social Science

This teaching major may be used as a major for the A.B. degree if the lower and upper division requirements listed below are completed and the student has been admitted to candidacy for the general secondary credential and has completed at least eight units of professional courses in education by the date of degree candidacy. Twelve units of social science courses in the major may be applied toward general education requirements in social science.

The major must include six units in United States history and work from at least four of the social science fields listed below.

*Lower Division*

A student must complete a minimum of six units in each of at least three fields he may select from the departments named below:

- Economics
- Geography
- History
- Political Science
- Sociology and/or Anthropology

*Upper Division*

A student must complete a minimum of 30 units with the approval of the departmental representative as follows:

| | |
|---|---|
| 1. A minimum of 12 units from any field named above | 12 |
| 2. A minimum of six units from each of two fields named above, excluding the field selected for the major upper division concentration | 12 |
| 3. Electives from social science fields | 6 |

*Graduate Year*

| | |
|---|---|
| Post-bachelor work selected with approval of the departmental representative | 4 |

### Major in Spanish

*Lower Division*

| | |
|---|---|
| Spanish 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| French 1, 2, or German 1, 2, or Latin 1, 2, or their equivalents | 6 |
| History 4A-4B, or 8A-8B (recommended) | |

Six units from courses 1, 2, 3, 4 in French, German, or Latin may be applied toward general education requirements.

*Upper Division*

| | |
|---|---|
| Spanish 101A-101B, Conversation and Composition | 6 |
| Spanish 198, Comprehensive Reading and Survey | 3 |
| Upper division courses in Spanish with a maximum of six units which may be selected from related fields with the approval of the departmental representative | 15 |

*Graduate Year*

| | |
|---|---|
| Spanish 201, Old Spanish | 2 |
| Spanish 204, Seminar in Spanish-American Literature | 2 |

**Minor in Spanish** (Not available to Romance Languages majors)

A minimum of 21 semester units required.

| | Units |
|---|---|
| *Lower Division* | |
| Spanish 1, 2, 3, 4, 5, 6, or equivalents | 16 |
| History 4A-4B, or 8A-8B (recommended) | |
| *Upper Division* | |
| Spanish 101A-101B, Conversation and Composition | 6 |

**Major in Speech Arts**

The requirements for the A.B. degree and the special secondary credential in Speech Arts should be completed simultaneously. Refer to the special secondary credential in Speech Arts. After the above requirements have been met, the candidate for the general secondary credential shall complete a graduate year including the following courses in his major:

*Graduate Year*

Select four units from the following courses:

| | |
|---|---|
| Speech Arts 260, Seminar in Oral Interpretation | 2 |
| Speech Arts 221, Seminar in Articulatory Problems in Speech | 2 |
| Speech Arts 245, Seminar in Technical Practice | 2 |
| Speech Arts 259, Seminar in Stage Direction | 2 |
| Speech Arts 200, Seminar in History or Oratory | 2 |

**Minor in Speech Arts**

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Speech Arts 3, Speech for Communication | 2 |
| Speech Arts 4, Extemporaneous Speaking | 3 |
| Speech Arts 11A-11B, Interpretation | 6 |
| Speech Arts 82, Radio Announcing | 3 |
| Electives in speech from 61 or 63 | 0–1 |
| *Upper Division* | |
| Speech electives (should be selected in consultation with departmental representative) | 6–7 |

# CURRICULA LEADING TO CREDENTIALS IN ADMINISTRATION AND SUPERVISION

## CURRICULA LEADING TO CREDENTIALS IN ELEMENTARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the general requirements of the State of California for all degrees, the candidate shall meet the following requirements:

(a) Possess a valid general elementary credential.
(b) Present written evidence of two years of successful teaching experience in the elementary schools.
(c) Complete 30 semester units for the administration credential (24 units for the supervision credential) of upper division or graduate work in addition to the holding of the general elementary credential. These units shall include specific courses designated by the State Department of Education and the college.
(d) Maintain a grade point average of 1.75 in work taken subsequent to receipt of the general elementary credential.
(e) Complete a minimum of 15 units of work in residence at San Diego State College.
(f) Make formal application to the Coordinator of Elementary Education.
(g) Earn the recommendation of the Division of Education.

Students applying for the elementary administration or supervision credentials should register with the office of the Chairman of the Department of Education and confer with the Chairman of the Administration Committee concerning the courses which may be offered in satisfaction of the requirements. Outlines of pattern requirements for either the elementary supervision or administration credentials may be obtained by writing the Coordinator of Elementary Education.

## SPECIAL SUBJECT SUPERVISION CREDENTIAL

This credential is available for persons who wish to supervise in a special subject area. Those desiring this credential should see the Chairman of the Division of Education.

## CURRICULA LEADING TO CREDENTIALS IN SECONDARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the general requirements of the State of California for all degrees, the candidate shall meet the following requirements:

(a) Possess a valid general secondary credential.
(b) Present written evidence of two years of successful teaching experience.
(c) Complete 18 semester units for the administration credential (15 semester units for the supervision credential) of upper division or graduate work after holding a valid general secondary credential. These units must include a specific pattern of courses designated by the State Department of Education and the college.
(d) Maintain a grade point average of 1.75 on units under (c).
(e) Complete a minimum of 12 units of work in residence at San Diego State College after holding the general secondary credential.
(f) Make formal application to the Coordinator of Secondary Education.
(g) Earn the recommendation of the Department of Education.

Students applying for the secondary administration or supervision credentials should register with the office of the Chairman of the Department of Education and confer with the Chairman of the Administration Committee concerning the courses which may be offered in satisfaction of the requirements. Outlines of pattern requirements for either the secondary supervision or administration credentials may be obtained by writing the Coordinator of Secondary Education.

# THE BACHELOR OF EDUCATION DEGREE AND THE GENERAL ELEMENTARY CREDENTIAL

## ELIGIBILITY FOR CANDIDACY

Teachers in California public schools with a minimum of 60 semester units of standard college work are eligible for candidacy for the Bachelor of Education degree. The purpose of this degree is to increase the professional competence of teachers in California public schools who do not hold a bachelor's degree. The educational program of each applicant shall be determined on the basis of his previous preparation and of the services he is to render. In the period of professional preparation the applicant shall be guided into those learning experiences designed to meet his cultural and professional needs.

## MINIMUM REQUIREMENTS

An applicant for the general elementary credential and the Bachelor of Education degree shall comply with the procedures for application and with the requirements for personal qualifications and general training and shall have completed a program including the following minimum requirements:

a. A four-year college course of 124 semester units, or the equivalent.

b. Eighteen semester units, or the equivalent, of professional work in education, constituting an organized program designed to prepare candidates in the following areas:

   (1) The evolution of educational thought and practice as to the function of the school in a democratic society, with emphasis on the elementary school.

   (2) The nature of individual growth and development; the psychological aspects of learning; child study, with emphasis on directed observation of children; mental hygiene and personality development; parent education; guidance practices.

   (3) The selection and arrangement of learning experiences, instructional materials, learning methods and appraisal techniques related to all statutory requirements for teaching, including reading, writing, spelling, language study, arithmetic, geography, history of the United States and of California, civics including the Constitution of the United States, music, art, physical education, healthful living, morals and manners, safety education, and fire prevention.

   (4) The use of audio-visual aids in instruction.

c. Directed teaching in the elementary school, eight semester units, or the equivalent, under the supervision of superior teachers in actual classroom situations of the elementary school level.

d. Sixty-one semester units or the equivalent in basic subject fields, distributed approximately as follows:

   (1) *Social Studies.* Twelve semester units, or the equivalent, with emphasis upon current economic, political, and social problems and world history and geography, sociology and anthropology. The legal requirement in United States Constitution and American history, institutions, and ideals shall be included in the social studies program.

   (2) *Science.* Twelve semester units, or the equivalent, in the fields of physical and biological science, with emphasis upon the study and use of the environment.

(3) *English,* including speech. Twelve semester units, or the equivalent, including oral and written expression, world literature, children's literature, dramatics, detection and correction of speech defects, and the use of books and libraries.

(4) *Mathematics.* Three semester units, or the equivalent, including subject matter and techniques essential in the teaching of mathematics in the elementary school.

(5) *Health and Hygiene.* Three semester units, or the equivalent, including personal hygiene, subject matter and techniques essential in health education to elementary school pupils.

(6) *Physical Education.* Three semester units, or the equivalent, including subject matter and techniques essential in the teaching of physical education to elementary school pupils.

(7) *Music.* Eight semester units, or the equivalent, including content and techniques appropriate for the elementary school.

(8) *Art.* Eight semester units, or the equivalent, in graphic art and industrial arts applicable to learning experiences appropriate for elementary school children.

e. The remaining units necessary to complete the requirements for the Bachelor of Education degree shall be distributed among those offerings of the institution that best serve the cultural and professional needs of the candidate, except that a course or the equivalent in fire prevention must be included.

## EVALUATION OF TEACHING EXPERIENCE AND SUBJECT MATTER FIELDS

a. A candidate with two or more years' teaching experience may be awarded a maximum of 8 semester units of credit, or the equivalent, in directed teaching provided he demonstrates satisfactory skill to a representative of the institution under whose direction he is completing his degree program, or provided other conditions set by the institution to insure classroom skill are met. This credit shall not be applied until the candidate has completed at least 116 semester units, or the equivalent, of his program.

b. Credit toward the B. Ed. degree may be secured by passing comprehensive examinations in the fields of study mentioned in paragraphs (b) and (d) above.

## INSTITUTION AND RESIDENCE REQUIREMENTS

a. A minimum of 30 semester units, or the equivalent, must be secured from the college conferring the degree.

b. A least 12 semester units, or the equivalent, must be earned in campus residence course work at the college conferring the degree and must be secured after completion of at least 90 semester units, or the equivalent.

c. A maximum of 30 units may be secured by examination.

# PREPROFESSIONAL AND VOCATIONAL CURRICULA

Preprofessional and vocational curricula, which usually require four years of collegiate work, are offered. Curricular outlines of preprofessional study, which are presented on the following pages, meet the typical requirements for admission to professional schools. Students expecting to complete their professional training at other institutions should modify the suggested outlines of study to meet the requirements of the professional schools of their choice. Curricular outlines for complete training leading to vocations are also presented on the following pages.

Curricular outlines are presented for the following:

Preagricultural
Business
Predental
Engineering
Home Arts
Inter-American Relations
Journalism
Laboratory Technique
Prelegal
Life Science Vocational
Premedical
Personnel Management
Prepharmacy
Public Administration
Recreation
Presocial Work

Students planning to enter professional or vocational occupations in forestry, nursing, optometry, or veterinary science may obtain assistance from advisers in these areas in planning lower division courses leading to further education in these fields.

## PREAGRICULTURAL CURRICULA

These curricula are provided for students who plan to enter the field of agriculture to enable them to obtain basic science and general education courses before transferring to an agricultural institution. These students should ascertain the lower division requirements of the college to which they expect to transfer and include such requirements in the plan suggested below.

Students in high school preparing to study agriculture should include the following subjects: Elementary algebra, plane geometry, intermediate algebra, trigonometry, chemistry, physics, mechanical drawing, and three years of one foreign language, if required by the college to which the student expects to transfer.

*Curriculum in Plant Science:* Freshman year, physical education activities, Health Education 21, Chemistry 1A-1B, Botany 2A-2B, Physics 2A-2B, English 1, and Speech Arts 3 (32 units); sophomore years, physical education activities, Economics 1A-1B, English 2A or other literature course, Chemistry 101A-101B, Geology 1A or 2A, Bacteriology 1, Zoology 1A and Psychology 1 (32 units).

*Curriculum in Animal Science:* Freshman year, physical education activities, Chemistry 1A-1B, Zoology 1A-1B, Physics 2A-2B, English 1, Speech Arts 3, Health Education 21 (32 units); sophomore year, physical education activities, Psychology 1, English 2A or other literature course, Economics 1A-1B, Bacteriology 1, Botany 1, Chemistry 101A-101B, Zoology 20 or 8, and 100 (36 units).

Students should consult with the adviser in the preagricultural curriculum for selection and arrangement of courses.

## BUSINESS CURRICULA

The Division of Business consists of three departments: Accounting and Business Management; Marketing; and Business Education, Secretarial and Office Management. Each department offers a major in business with fields of specialization within the department, leading to the bachelor of science degree.

The Department of Accounting and Business Management offers specialization in accounting, banking and finance, business management, insurance, and credit management. The Marketing Department offers specialization in marketing and in personnel management. The Business Education, Secretarial and Office Management Department offers specialization in secretarial and office management and in teacher education leading to the special secondary and general secondary school credentials.

The first two years of the business curricula are introductory. During this period the student acquires a basis for further study and an understanding of the place that business fills in modern economic life. There are some differences in the lower division requirements in the various fields of specialization. A selection of the field of specialization should be made as early as possible by the student. A student may transfer from one field of specialization to another, but with possible loss in time because of the differences in requirements among the various fields. The student follows a program of studies that is designed to provide a vocational ability in at least one area.

Refer to the departments in the Division of Business for specific requirements in the business major with fields of specialization. Students should consult with the departmental adviser in selection and arrangement of courses.

## PREDENTAL CURRICULUM

Candidates for a degree in dentistry should ascertain the entrance requirements of the dental college to which they expect to transfer and should make whatever changes in the following typical requirements that may seem desirable in satisfying the requirements of the specific dental college.

The curriculum for dental hygiene is essentially the same as for predentistry.

High school students planning to enter dentistry should include in the high school program the following subjects: Elementary algebra, plane geometry, intermediate algebra, chemistry, physics, mechanical drawing, and three units in one foreign language if required by the college to which a student expects to transfer.

*Course of Study for Predental Curriculum:* Freshman year, physical education activities, Health Education 21, Psychology 1, Speech Arts 3, English 1, English 2A or other literature course, Chemistry 1A-1B, Physics 2A-2B and 3A-3B (32 units); sophomore year, physical education activities, Chemistry 5A, Zoology 1A-1B, Mathematics C and D, social science including courses in U. S. history and Constitution, and electives in general education (32 units).

The following courses for a third year in preparation for dentistry are suggested for students who fail to receive acceptance from a dental college after completing the prescribed 60 units: Chemistry 101A-101B; Zoology 100 and 106; Art 119A, Psychology 11; additional courses in general education.

## ENGINEERING CURRICULA

The engineering program is designed to give a student a sound training in the fundamentals of general engineering with a minimum of specialization, and at the same time provide the broad training and experiences which constitute a liberal education. The program leads to the degree of Bachelor of Science in Engineering.

Students graduating in engineering will find employment in various functions of their chosen field. For example, a student who has selected the mechanical engineering option may find employment in the operation of a steam plant, or in the application and sales of construction equipment.

The program is intended to provide the essential training in those functions which are within the scope of a four year program. These, specifically, are the production, operation, maintenance, service, sales, and management functions of engineering. Curricula and individual courses are designed to emphasize these functions. Students who desire training for work in such fields as research, design, and development should plan to complete their education at a University.

### FIELDS OF SPECIALIZATION

The freshman and sophomore years of the engineering curricula concentrate upon the development of an adequate scientific and mathematical background together with introductory engineering courses. With minor variations the first two years of study are the same for all engineering students.

The junior and senior years concentrate upon the application of this background to the study of engineering theory and practice. In the junior and senior years, optional programs are available which provide limited specialization in aeronautical, chemical, civil, electrical, electronics, and mechanical engineering, and in engineering economics. Normally, students are expected to elect one of these basic options. In certain cases equivalent programs may be worked out which will better suit the needs of an individual student.

## HIGH SCHOOL PREPARATION

The high school program should include the following subjects: Elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; solid geometry, ½ unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit.

## GENERAL REQUIREMENTS

For general requirements for the B.S. degree, refer to the section of the bulletin entitled: Bachelor of Science Degree in Arts and Sciences and to the section entitled: General Requirements for the Bachelor of Arts and Bachelor of Science Degrees.

## SPECIFIC REQUIREMENTS

For specific outline of courses in the engineering curricula including recommended electives to fulfill the requirements for general education, refer to Engineering in the section entitled: Announcement of Courses.

# HOME ARTS CURRICULUM

The Home Arts curriculum is designed to meet the needs of those students who wish to apply their knowledge to the various problems of home living. This curriculum is based on the *general major* in arts and sciences with a field of concentration in Home Economics combined with two other fields to be selected by the student in consultation with the home arts adviser and the Dean of Instruction. (Refer to the General Major in the section of the bulletin entitled: Bachelor of Arts Degree.) By appropriate selection of courses, the student may prepare for several related fields, such as radio, community recreation, home service in industry, merchandising, and social work.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the general major | 26 |
| General major (upper division) | 36 |
| Electives | 17 |
| Total units required for graduation | 124 |

*Specific requirements for the major:* Lower division: Home Economics 1, 5, 10, 55, 61A-61B; Sociology 50 and 51; six lower division units in a third field. Upper division: 15 upper division units to be selected from Home Economics 100, 101, 105, 135, 150, 160A-160B, 170, with the approval of the adviser in home arts; nine upper division units to be selected from a second field; and 12 upper division units to be selected from a third field. A minimum of six lower division units is usually required in each field of the general major as preparation for upper division work.

Students should consult with the adviser in the home arts curriculum for selection and arrangement of courses.

# INTER-AMERICAN RELATIONS

This curriculum, designed around the general major, provides (1) a basis for a more effective understanding of the opportunities and problems of international relations in the western hemisphere; (2) facilities for a basic education and training for a business or professional career involving international relations; (3) undergraduate preparation for the comprehensive examinations required for appointment in the Foreign Service, Department of State.

High school students preparing to enter this area of Foreign Service should include in the high school program three years in one foreign language, preferably Spanish.

Students should consult with the adviser in Inter-American Relations regarding an appropriate program of studies.

## JOURNALISM CURRICULUM

The purpose of the journalism curriculum is to prepare students for positions on mass communications media and to offer to teacher candidates background for educational work in journalism. The four-year program contemplates that in addition to professional training, majors shall acquire a broad background in such related fields as English, sociology, psychology, political science, economics, and history. All majors are required to take survey courses in newspaper and radio techniques and photography. Introductory courses in mass communications research are offered. The program is so designed that during the final two years, majors may take specialized work in newspaper reporting and editing, magazine writing, advertising and radio production. Producing the campus newspaper serves as a laboratory for students. Arrangements are made for students to serve internships on daily and weekly newspapers, industrial magazines and radio stations.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 12–15 |
| Major (upper division) | 24 |
| Electives | 40–43 |
| Total units required for graduation | 124 |

*Specific requirements for the major:* Lower division: Journalism 51A-51B, Physical Science 10, Speech Arts 81, and Business 2A, or proficiency in typing. Upper division: 24 upper division units in journalism including Journalism 102 and 151. A minor is not required.

## LABORATORY TECHNIQUE CURRICULUM

The laboratory technique curriculum is offered with the B.S. degree. This curriculum, with modifications for the types of licensures, is provided to satisfy the academic requirements to qualify for the examinations given by the State of California Public Health Department for Public Health Bacteriologist, Clinical Laboratory Technician, and Medical Technologist. If the curriculum outlined by this College is followed, only six months of apprenticeship are required to complete the qualifications for the licensing examinations for Public Health Bacteriologist and Clinical Laboratory Technician. Five years of experience as a Clinical Laboratory Technician are necessary to qualify for the examination for licensure as a Medical Technologist.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major required for State licensure exclusive of General Education courses | 23–37 |
| Major (upper division) | 36–44 |
| Electives | 2–24 |
| Total number of units for graduation | 128 |

*Specific requirements for the major:* Lower division (including courses in General Education, but required for licensure): Chemistry 1A-1B, * Chemistry 5, Biology 3 and 4 or Zoology 1A-1B, Bacteriology 1 or 101, Physiology, 1A and 1C, * Physics 2A and 3A. Upper division: 36 upper division units, including Chemistry 101A, *Chemistry 114, 115, 116, Bacteriology 102, 103 and one or more courses selected from Bacteriology 105, 106 or 107, * Zoology 109, Zoology 128, 104, 126, and 108, and additional electives to complete the major. Twelve units of science courses in the major field may be counted as general education in natural science.

Students should consult with the adviser in the Laboratory Technique Curriculum for selection and arrangement of courses.

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* These courses are not required for the Public Health Bacteriologist license.

## PRELEGAL CURRICULUM

The entrance requirements of schools of law range from two years to three and four years of prelegal work. The lower division requirements of the arts and sciences curricula should be met in full whether the prelegal curriculum extends over a period of two, three, or four years.

The following curriculum is designed to meet the recommendations of standard American schools of law for a broad and liberal education. For the majority of pre-legal students a general major with concentration in economics, political science, and history, or a major-minor combination in these fields will constitute the most effective preparation for later professional study in law and for later activities in the field of business.

*Preparation for the major:* Lower division: Business 14A-14B, Economics 1A-1B, Political Science 71A-71B or 1A-1B, and a year-course in history. Recommended: six units from Philosophy 1A-1B, 3A-3B, or 20.

### Upper Division

In the junior and senior years the student will plan his course with the counsel of his adviser in terms of the field of law in which he plans to work, but keeping in mind the entrance examinations and other requirements for admission to schools of law. The course selected will be drawn from the preferred and recommended lists below. Optional courses, that is courses not found in the preferred and recommended lists, may be taken to satisfy the general major pattern requirement, but only with the consent of the student's prelegal adviser. These courses are not to be considered as general electives.

The student must complete a master plan approved by the prelegal adviser and filed with the Registrar.

*Preferred List*

Economics 133, 150, 151, 170.
History 151A-151B, 172A-172B, 175A-175B.
Philosophy 121, 129.
Political Science 139A-139B.
Psychology 145.
Sociology 173, 174.

*Recommended List*

Economics 102, 110, 111, 128, 131, 135, 142, 171, 172, 185, 190, 195.
English 106, 120, 126A-126B, 129, 131, 192.
History 111A-111B, 121A-121B, 143A-143B, 175A-175B, 179A-179B, 181A-181B.
Philosophy 101, 111A-111B, 130.
Political Science 105, 111A-111B, 120, 121, 122, 140A, 140B, 142, 143, 150A-150B, 152, 153, 154, 158A-158B, 198.
Sociology 152, 170, 174, 187.
Speech Arts 162, 191, 192.

## LIFE SCIENCE VOCATIONAL CURRICULA

Vocational curricula are offered for the fields of entomology, fish and game, and wild life. Requirements for these curricula are the same as for the B.S. degree in zoology; the specialization for a particular occupation lies within the upper division electives of the B.S. degree program.

Students in high school planning to enter any of these life science curricula should include in the high school program the following subjects: Elementary algebra, plane geometry, intermediate algebra, trigonometry, chemistry, and physics. Three years of French or German recommended.

*Courses in Entomology, Fish and Game, and Wild Life:* Courses in the field of specialization may be selected from the following:

Botany 105, Taxonomy of Plants
Chemistry 101A, Organic Chemistry
Economics 140 or
  Psychology 104, Statistics
Political Science 140A-140B, Public Administration
Zoology 101, General Physiology
Zoology 104, Microtechnique
Zoology 110, Limnology
Zoology 113, Ornithology
Zoology 115, Cold Blooded Vertebrates
Zoology 118, Mammalogy
Zoology 121, General Entomology
Zoology 122, Systematic Entomology
Zoology 125, Economic Entomology
Zoology 126, Medical Entomology
Zoology 128, Parasitology
Zoology 153, Economic Biology

Students should consult with the adviser in the life science curricula for selection and arrangement of courses.

## PREMEDICAL CURRICULUM

The entrance requirements of medical colleges ordinarily range from three to four years of premedical work. The lower division requirements of the liberal arts curricula include the general requirements of standard medical colleges and should therefore be met in full whether the curriculum extends over a period of three or of four years. All plans for premedical work should include an arrangement of courses to meet the requirements of the medical college which the student expects to enter.

Students ordinarily elect to concentrate in chemistry and zoology with a major in one and a minor in the other. Requirements for these majors and minors are described under these departments.

High school students planning to enter medicine should include in the high school program the following subjects: Elementary algebra, plane geometry, intermediate algebra, chemistry, physics, two or three years of French or German. Two years of Latin also recommended.

Students should consult with the adviser in the premedical curriculum for selection and arrangement of courses.

## PERSONNEL MANAGEMENT CURRICULA

A student desiring to prepare for personnel management may follow one of the three plans outlined below. Emphasis is placed on different areas, depending upon the vocational objective. A student preparing for graduate work in personnel management should consult with the adviser in his selected field in choice and arrangement of courses. Courses in the major are in addition to 45 units in general education courses.

*Personnel Management:* This curriculum is a general major with the three fields of study in business, economics, and psychology. Lower division requirements: Business 14A and 20, Psychology 6, and Economics 1A-1B (15 units). Upper division requirements: Business 121, 153, 154, 198A; Economics 150, 151, 185; Psychology 104A, 105A, 121, 131, 152 (36 units). Other courses in business may be substituted for Business 14A and 198A on the basis of individual counseling. Four additional upper division units must be completed for graduation. It is recommended that these units and additional electives be chosen from the following: Business 186; Psychology 104B, 122, 132; Sociology 110, 170, 185; Political Science 71A, 71B and 143.

*Public Personnel Management:* This curriculum is a general major with the three fields of study in political science, economics, and psychology. Lower division requirements: Political Science 71A-71B, Economics 1A-1B, and Psychology 6 (15 units). Upper division requirements: Political Science 140A-140B or 147A-147B, 144, 145, 146, 198; Economics 150, 151, 185; Psychology 104A, 105A, 121, 131, 152 (36 units). Another political science course may be substituted for Political Science 198 on the basis of individual counseling. Four additional upper division units must be completed for graduation. It is recommended that these units and additional electives be chosen from the following: Business 121; Economics 131; Political Science 142, 143.

*Pre-Industrial and Personnel Psychology:* This curriculum is offered under the major in psychology. For details, refer to Psychology in the section of the bulletin: Announcement of Courses.

## PREPHARMACY CURRICULUM

Some colleges of pharmacy offer a four-year curriculum, others a six-year curriculum of pharmacy. Students should ascertain the extent and requirements of the curriculum of the college of pharmacy they expect to enter. Colleges of pharmacy which offer the four-year curriculum normally permit not more than one year of credit in time for work completed in an institution other than a college of pharmacy. Colleges of pharmacy which offer a six-year curriculum normally permit not more than two years of credit in time for work completed in an institution other than a college of pharmacy. California state law requires that an applicant for the State Board Examination in Pharmacy must be a graduate of a recognized college of pharmacy which requires a resident attendance of not less than four years.

**The high school program should include the following subjects: Elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; foreign language, 2 units.**

At San Diego State College the following prepharmacy curricula are offered:

*Course of study for the four-year curriculum:* Freshman year, physical education activities, English 1 and a literature course, Chemistry 1A-1B, Zoology 1A-1B, Botany 1, Mathematics 3A or 1, and electives (32 units).

*Course of study for the six-year curriculum:* Freshman year same as for the four-year curriculum. Sophomore year, physical education activities, foreign language if needed, social science including U. S. history and Constitution courses, Physics 2A-2B and 3A-3B, Psychology 1, Health Education 21, and electives (32 units).

Students should consult with the adviser in the prepharmacy curricula for selection and arrangement of courses.

## PUBLIC ADMINISTRATION CURRICULUM

The program of training in public administration can be developed through an adaptation of a general major or through a major in political science. In either case, the student will follow a sequence of work dealing with the principles and problems of organization for the carrying out of the functions of government, and public management. This latter aspect deals primarily with the directing and coordinating of work operations, the staffing of public agencies, the processes of budgeting and financial control, and the dynamics of management, namely planning, research, communications, leadership and human relations in the administrative process.

The public administration curriculum may be adapted to several goals, one being the taking of junior administrative examinations for entrance into the government service at the local, state or federal levels, and preparation for advancement up the governmental ladder. It is designed also to prepare students for graduate work in public administration.

Selected students may participate in an internship program in local government offices. Working under the close supervision of governmental officials and the adviser in public administration, the intern deals with actual administrative procedures and problems in government.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 12 |
| Major (upper division) | 36 |
| Electives | 31 |
| Total units required for graduation | 124 |

*Specific requirements for the major:* Lower division: Political Science 71A-71B, Economics 1A-1B. Upper division: 36 upper division units, including Political Science 140A-140B, 198, Economics 131, and 140.

Students planning to enter public administrative fields should consult with an adviser in public administration.

### Minor

A *minor in public administration* is offered in arts and sciences for students majoring in fields other than political science or public administration. This minor consists of Political Science 71A-71B, 140A-140B, and three units of upper division work selected from Political Science 198, Internship in Government Administration, or other political science course.

### Certificate Programs in Public Administration and in Social Work Administration

*Certificate in Public Administration:* Admission to candidacy for the Certificate in Public Administration is open to all public service employees without reference to previous academic experience. Candidacy will be established by approval of the Coordinator of Public Administration. To receive the Certificate in Public Administration, the candidate must complete an approved pattern of eight courses, with a grade point average of 1.5.

*Certificate in Social Work Administration:* Admission to candidacy for the Certificate in Social Work Administration will be established by approval of the Coordinator of Public Administration. To receive the Certificate in Social Work Administration, the candidate must complete an approved pattern of 30 units in courses at San Diego

State College with a grade point average of 2.0. Prerequisites for admission to candidacy are 20 units in approved social science courses.

Candidates for the certificate programs may obtain further information on requirements by writing to the Coordinator of Public Administration, San Diego State College.

## RECREATION CURRICULUM

The curriculum in recreation is arranged under the plan for the general major to provide a program to train for recreation and camp leadership, work with youth groups, and related activities. Refer to the general major in the section of the bulletin entitled: A.B. Degree in Arts and Sciences.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 20–22 |
| General major (upper division) | 36 |
| Electives | 21–23 |
| Total number of units required for graduation | 124 |

*Specific requirements for the major:* Lower division: Sociology 50 and 51; Physical Education 53. In addition, men are required to complete Physical Education 63. Women must include Physical Education 2A, 4, 5, and 6. Required in related fields: 12 units selected from the fields of art, industrial arts, music, physical education, and speech arts, with a maximum of six units in any one field. Courses in related fields which are designated as general education courses may be applied toward general education requirements. Upper division: 36 units distributed as follows: 13 units selected from Recreation 165, 170A-170B, 184A-184B, 199; nine units selected from Sociology 110, 173, 174, 185, 187, 190; nine units selected from Psychology 106, 131, 132, 145, 150, 170; Education 174; Physical Education 151. Four additional upper division units in electives are required to complete the 40 upper division units for graduation.

Students should consult with the adviser in the Recreation Curriculum for selection and arrangement of courses.

## PRESOCIAL WORK CURRICULUM

The professional curriculum in social service prepares for admission to graduate work in recognized American schools of social work. This curriculum should be pursued by those who plan careers in federal, state and local welfare work; social work in public schools including preparation for a teaching credential; family and children's private case work agencies; social settlement work; county probation work; child welfare agencies; statistical and investigational work in private and public agencies; work in public institutions for the defective and delinquent; medical social service and psychiatric social work in hospitals and clinics; executive positions in social work; and social work in numerous other organizations.

The lower division requirements of the arts and sciences curricula include the general requirements of recognized professional schools of social work and should therefore ordinarily be met in full. The courses indicated below meet the requirements for the general major. For description of the general major, refer to the section in the bulletin on the bachelor of arts degree in arts and sciences.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 21 |
| Major (upper division) | 38 |
| Electives | 20 |
| Total number of units for graduation | 124 |

*Specific requirements for the major:* Lower division: Sociology 50 and 51, Economics 1A-1B, Political Science 71A-71B or 1A-1B, and Psychology 11 (21 units). Biology 1 or 3 and 4 should be taken as general education courses in natural science. Recommended: courses from anthropology, foreign language, and speech arts. Upper division requirements: Sociology 103, 187, 190, and an upper division elective (12 units); Economics, nine units selected from 102, 131, 150, 170, 185, 195; Political Science, six units selected from 140A, 140B, 142, 143; Psychology 145, 150, 151 (nine units); Zoology 165 or 155 (two units). An additional two units in upper division electives must be taken to complete the 40 upper division units required for graduation. Twelve units of social science in the major field may be counted as general education in social science.

Students should consult with the adviser in the social work curriculum for selection and arrangement of courses.

### Certificate in Social Work Administration

A certificate in Social Work Administration is available to persons professionally engaged in the field of social work. This program is described under the Public Administration Curriculum.

# ANNOUNCEMENT OF COURSES

## COURSE NUMBERS

Courses numbered from 1 to 99 are lower division (freshman or sophomore) courses; those numbered 100 to 199 are upper division (junior or senior) courses; those numbered 200 to 299 are graduate courses (see section on Admission and Registration for information concerning eligibility to enroll in these courses) those numbered 300 to 399 are professional education courses to be taken at the graduate level.

## CREDIT FOR UPPER DIVISION AND GRADUATE COURSES

A student with lower division standing is not eligible to take upper division courses, with the following exceptions: A student in the last semester of his sophomore year who is approaching upper division standing must carry sufficient lower division units to complete the required minimum of 60 units may carry upper division units for the remainder of his study load. A student with sophomore standing may carry upper division courses for upper division credit provided that he has the written approval of the chairman of the department and the Dean of Instruction. This written approval must be filed in the Office of the Registrar on the form "Adjustment of Academic Record." Blank forms may be obtained by the student at the Office of the Registrar.

Graduate credit for courses numbered 200 to 299 is limited to students with graduate status. (See Admission to Graduate Study in section on Admission and Registration.)

## GENERAL EDUCATION COURSES

Course numbers preceded by an asterisk (*) are general education courses which may be applied toward the 45 unit requirement in general education, unless specifically required as part of the major. Refer to the list of general education courses in the section of the bulletin entitled: General Requirements for the Bachelor of Arts and Bachelor of Science Degrees.

## UNITS

Figures in parentheses indicate the unit value of the course.

One "unit" represents 50 minutes of recitation or lecture, together with the required preparation, or three hours laboratory work each week for a semester of 18 weeks.

## SEMESTER IN WHICH COURSES ARE OFFERED

Roman numeral I indicates course is offered in Fall semester. Roman numeral II indicates course is offered in Spring semester.

Following the course title are designations of credit and the semester in which course is offered. Examples:

(3) I----------------------------------Three units. Offered first semester
(3) I, II---------------Three units. Offered first semester and second semester
(3-3) Year, I
Three units each semester. Year sequence beginning in the first semester
(3-3) Year, I, II
Three units each semester. Year sequence beginning either semester

Although the college fully expects to carry out the arrangements planned in the list of courses, it reserves the right to make changes. Classes in which the enrollment does not come up to the minimum number set by the State Department of Education may not be offered or may be postponed.

### PREREQUISITES

Prerequisites for courses are stated. A student should not enroll in a course for which he is not eligible.

Admission to all graduate courses requires graduate status and permission of the instructor.

### PROVISIONAL COURSES

Courses number 40 to 45 are open only to students who are in the provisional program. Other students (those not having provisional status) are not eligible to take these courses.

# ACCOUNTING AND BUSINESS MANAGEMENT

## IN THE DIVISION OF BUSINESS

### Major

A *major in arts and sciences* is offered in *business* for the B.S. degree. Students majoring in this department may specialize in one of the following sub-fields: (A) Accounting, (B) Banking and Finance, (C) Business Management, (D) Insurance, and (E) Credit Management. Courses in the major are in addition to 45 units in general education courses. A minor is not required of business majors.

Lower division requirements in the major: Business 2, 8, 14A-14B, 18A-18B; Economics 1A-1B. Upper division requirements: A minimum of 36 upper division units to include Economics 111 or 170 or Business 123; Economics 140; Business 121; and 27 units selected from one of the following subfields:

A. *Accounting:* Business 118A-118B, 133, 160A-160B, 161A-161B, 162, 163, 164A-164B, 165A-165B, 167, 169.
B. *Banking and Finance:* Business 105A, 118A-118B, 125, 133, 134, 137, 153, 154, 162, 163; Economics 102, 131, 135, 142, 190.
C. *Business Management:* Business 118A-118B, 123, 125, 126, 133, 134, 137, 153, 154, 163, 184; Economics 128, 135, 150.
D. *Credit Management:* Business 103A, 123, 133, 134, 137, 162, 163, 186; Economics 105, 131, 135, 170.
E. *Insurance:* Business 118A-118B, 125, 126, 127A-127B, 128A-128B or 128C-128D or 128E-128F, 133, 134; Economics 128, 135, 142.

### Minor

A *minor in arts and sciences* is offered in *business* with specialization in one of the subfields listed under the major above. The minor consists of 15 to 22 units in business courses, six units of which must be in upper division courses selected from one of the subfields listed under the major above. Business 14A-14B must be included in the minor.

A *teaching minor* is not offered in business but is offered in *business education* for the general secondary school credential. For statement of requirements, refer to the credential.

### Courses in Accounting and Business Management

All business courses in this department for the major or minor are listed in this section of the bulletin under Business.

# AESTHETICS

## IN THE DIVISION OF FINE ARTS

Major or minor work is not offered in aesthetics; however, certain courses in this field are required as part of the majors in art and in music. For specific information, refer to these departments.

### Lower Division Courses

***2. Introduction to Music** (3) I

Practical approach to hearing music with understanding and pleasure, through study of representative compositions of various styles and performance media, great musicians and their art. Music correlated with other arts through lectures, recordings, concerts. Closed to music majors or minors.

***5. Art Orientation** (2) II

An illustrated lecture course dealing with aesthetic meaning and its relation to the structure of art products. Designed to increase both understanding and appreciation of the visual world in general and of the fine arts in particular.

***50. Appreciation and History of Art** (2) I

A survey of art development in the painting, sculpture, architecture, and handicrafts from dawn of art to the Renaissance. Illustrated.

***51. Survey of Mexican Art** (2) I

A study of Mexican and Middle American Art from earliest time to present.

**52A-52B. Survey of Oriental Art** (3-3) Year, I

A study of the art of the great cultures of the Orient. (52A is a prerequisite for 52B.)

### Upper Division Courses

***102. Great Music** (3) II

Instrumental and vocal music in the larger forms studied through directed listening. Artistic trends and their effect upon music composition and performance. No prerequisite, but completion of Aesthetics 2 recommended. Not open for credit to music majors. Formerly Aesthetics 100.

***138. Introduction to Aesthetic Appreciation** (1) I

Major forms of expression and aesthetic experience in art, music and literature, presented by an interdepartmental staff through lectures, demonstration, and panel discussions. Not open to students with credit for Comparative Literature 138.

***150. Appreciation and History of Art** (2) II

The period from the Renaissance through the modern school treated in the same manner as in Aesthetics 50.

**160. Techniques and Procedures of the Art Museum Worker** (3) I

Designed to acquaint the student with the nature and function of the art museum in the community and to give him experience in the methods by which it serves the public. Prerequisite: Aesthetics 5 or 50 and 150.

***162. History and Philosophy of the Dance** (2) I

A study of the historical background of the dance, with special emphasis upon its development in America and its present status in education and the creative arts. Not open to students with credit for Physical Education 162.

## AIR SCIENCE

### IN THE DIVISION OF AIR SCIENCE AND TACTICS

### Air Force Reserve Officers' Training Corps

The Department and Division of Air Science and Tactics at San Diego State College offers the curriculum prescribed by the Air Force Reserve Officers' Training Corps. This curriculum consists of a four-year course, including a two-year basic course and a two-year advanced course.

The objectives of the Air Force ROTC program are the development of qualities of leadership and character essential to civil and military responsibility and the training of officer reserve personnel. Completion of the four-year course and a bachelor's degree leads to commission in the Air Force Reserve. Students who have demonstrated outstanding qualities of scholarship and leadership may receive regular commissions in the Air Force. A maximum of one-third of the students graduating in the program may be eligible to receive the regular commission.

Flight training is not offered as part of this program; however, Air Force ROTC graduates have a high priority for such training and, if accepted, serve as reserve officers on active duty during the training period.

*Eligibility:* A regularly enrolled male student is eligible for admission to the basic course if he is a citizen of the United States, not less than 14 years of age and has not reached his 23d birthday, and is physically qualified for military training. For admission to the advanced course, the student must not have reached his 25th birthday and must have completed the basic course or its equivalent. At the discretion of the Professor of Air Science and Tactics, up to two years of pattern credit in the basic course may be allowed for prior active service in the armed forces. Normally, a student entering the advanced course must have two years of college work remaining. The applicant must pass required screening tests and be selected by the Professor of Air Science and Tactics and the President of the College.

Attendance at one summer camp is required of each student to qualify for the commission. The summer camp is six weeks in length and is held at an active Air Force base. The student receives $75 per month during this training period. Uniforms, equipment, subsistence, and transportation are furnished by the Air Force.

Students in the basic and advanced courses are furnished uniforms, equipment, and textbooks for military science. Students in the advanced course are given, in addition, commutation of subsistence allowance of approximately $31 per month. Upon acceptance of this allowance, the student executes a written agreement with the United States Government and with the President of the College to complete the advanced course, completion of such course becoming a prerequisite to graduation.

## Basic and Advanced Courses

The basic course requires three hours of instruction and drill per week each semester. The advanced course requires five hours. In addition, each student in the advanced course must attend one summer camp of six weeks. The advanced course is offered in three separate specialties to prepare the student for one of three distinct career fields in the Air Force. These options are General Technical, Administration and Logistics, and Flight Operations. Student selection of specialty is based primarily on the academic pursuits of the individual and the approval of the Professor of Air Science and Tactics. Students enrolled in the AFROTC program pursue their regular courses of study in fields of their choice. Major work is not offered in air science and tactics, but a minor is offered.

## Minor

A *minor in arts and sciences* is offered in *air science and tactics*. The minor consists of 15 to 20 units in air science and tactics, six units of which must be in courses carrying upper division credit.

## Lower Division Courses

**1A-1B. First-Year Basic Air Science** (2-2) Year, I

Two hours of classroom instruction and one hour of drill per week. World Political Geography to provide the AFROTC student with a general knowledge of geopolitics and a global viewpoint for use in directing his future studies of subsequent Air Force subjects.

**21A-21B. Second-Year Basic Air Science** (2-2) Year, I

Two hours of classroom instruction and one hour of drill per week. Maps and aerial photographs, aerial navigation, meteorology, aerodynamics and propulsion, applied air power, organization for the defense of the U. S. A., personal maintenance, and weapons familiarization.

## Upper Division Courses

**131A-131B. First-Year Advanced: General Technical** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. The primary technical fields and the related equipment used in the Air Force.

**132A-132B. First-Year Advanced: Administration and Logistics** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. Individual records, nonappropriated funds, transportation, and supply.

**133A-133B. First-Year Advanced: Flight Operations** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. An augmentation of the academic phases of the training in the Flying Schools of the Air Training Command. (Student must be qualified for and express the desire to undertake flying training upon receipt of commission. Training will be taken as a student officer in grade of 2nd Lieutenant upon completion of the academic and AFROTC programs.)

**141A-141B. Second-Year Advanced: General Technical** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. A continuation of Air Science 131A and 131B.

**142A-132B. Second-Year Advanced: Administration and Logistics** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. Purpose and basic functions of the staff, administration of personnel at wing-base level, functions of Comptroller and Food Service Supervisor.

**143A-143B. Second Year Advanced: Flight Operations** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. Advanced instruction in navigation and bombing and the theory of radar as applied to both.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

# ANTHROPOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

Major work is not offered in anthropology; however, courses in anthropology may be included as part of a general major or social science major. Students wishing to use anthropology as a field of concentration in the *general major* should include the following courses in the lower division: Anthropology 1A-1B, 2 or 3; Geography 1, 2 or Geology 1A-1B; Sociology 50, 51; recommended: Spanish or German. The following supplementary fields of study are recommended in the upper division with a view to later specialization in anthropological work: For *archaeology:* art, geography, geology; for *physical anthropology:* psychology, statistics, and zoology; for *museum work:* art, education, and psychology. For further information on the *general major*, refer to the section on the Bachelor of Arts Degree.

Courses in anthropology may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of the requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in anthropology. The minor consists of 15 to 22 units in anthropology, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in anthropology for the general secondary credential; however, anthropology may be used as a part of the *social science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the requirements for the teaching minor for these credentials.

### Lower Division Courses

*** 1A-1B. General Anthropology** (3-3) I

Origin and antiquity of man. Theories of human descent. Classification of races. Origin and early development of civilization.

**2. Physical Anthropology** (3) I

An introduction to the studies of primatology and anthropometry. The comparative anatomy of the monkeys and great apes, the emergence of the anthropoids, the reconstruction of early man from fossil evidence. The landmarks, measures and indices used in the metrical study of the living human body and skeletal material. Sexual differences and growth changes in the skull and skeleton. Medico-legal applications.

**3. Survey of Archaeology** (3) II

A review of the history of modern archeology and a discussion of its methods. The development of archaeological techniques in reconstructing the ancient cultures of the Mediterranean world. The problems of present day archaeology in the Near East, the Orient and the Americas. The principles and basic techniques used in the excavation of sites and the reporting of findings.

*** 54. Social Anthropology** (3) II (Not offered in 1952-53)

An anthropological study of social institutions in primitive and civilized societies. The evolution of family organization, religion, property right, and government traced in elementary and advanced civilization.

### Upper Division Courses

**151A. The North American Indian** (3) I

Pre-Columbian cultures of the North American Indian. The origin and migration of New World peoples. Industries, arts, crafts, social organization, religion and other phases of American Indian civilization.

**151B. Indian Civilization of Middle America** (3) II

The development of civilization in Pre-Columbian Mexico and Central America: Aztec, Mayan, and related cultures.

*** 152. World Ethnography** (3) I (Not offered in 1952-53)

The cultural patterns of representative aboriginal peoples. Industries, arts, social organization and supernaturalism considered with a view to environmental adjustment, historical development and functional interrelation. Ethnological theories reviewed and applied in interpreting illustrative aboriginal societies.

**153. Primitive Religion** (3) II (Not offered in 1952-53)

Beliefs and ritual of primitive man. Magic and religion. Forms of animism and polytheism. Primitive mentality and the supernatural.

**161. The California Indian** (3) Summer

A survey of native California Indian culture with stress on the Indian groups of Southern California. The industries, arts, social organization, folklore and religion will be considered as revealed through the study of living peoples and archaeological evidences.

*** 165. Ethnology and Race Psychology** (3) I (Not offered in 1952-53)

The biological basis of race, somatic and serologic typology, racial mentality, tests and their ethnopsychological significance, abnormality in ethnic groups. Race and culture; ethnic aspects of demography.

**172. Indian Cultures of the Southwest** (3) Summer

Indian cultures of the past and present in the Southwestern states. Arts, crafts, architecture and religion as revealed through archaeology and ethnology.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## ART

### IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is offered in *art* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Every student who plans to major in art, whether in arts and sciences or in the teacher education program, must complete the following basic courses: Required in the major: Art A (or high school equivalent), Art B, 6A-6B, and 14A. Required in general education: Aesthetics 5 or 51 and 50.

In arts and sciences the student majoring in art may choose either a group of courses in which the crafts are emphasized or a group of courses in which the graphic arts are emphasized. One of the following plans should be selected:

*Emphasis on crafts:* The student should add to the list of basic courses required of all art majors the following courses in the major: lower division: Art 6D, 7, 61B and two units of art electives; upper division: Aesthetics 150, Art 106A or B or C, 106D, 111A, 117A-117B, 119A-119B, and eight units of art electives. This program leads in the direction of industrial design, interior design, cabinet making, sculpture, weaving, textile design, ceramics, etc.

*Emphasis on graphic arts:* The student should add to the list of basic courses required of all art majors the following courses in the major: lower division: Art 15A, 16A, and four units of art electives; upper division: Aesthetics 150, Art 106A or 106B, 112A-112B, 115A-115B, 116A-116B, 117A, and six units of art electives. This program leads in the direction of illustration, portraiture, landscape painting, mural design, poster design, production illustration, advertising design, fashion design, etc.

Art majors are not required to complete a minor.

A *teaching major in art* is offered for the general secondary and special secondary credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *art*. The minor consists of 15 to 22 units in art, six units of which must be in courses carrying upper division credit.

A *teaching minor* is offered in *art* for the general secondary credential. Art may be offered only as a second minor for the general elementary and kindergarten-primary credential. For statement of requirements, refer to these credentials.

### Art Appreciation, History and Orientation

For courses in appreciation, history of art, and art orientation, see aesthetics. Many students, regardless of the field in which they may be majoring, recognize the need for an intelligent approach to the subject of art and art appreciation. However, due to the erroneous popular feeling that art is a subject requiring "talent," these students may refrain from enrolling in art courses. For students who desire a better understanding of art, but who do not hope to acquire any of the art skills, the following courses are recommended.

| | *Units* |
|---|---|
| Aesthetics 5, Art Orientation | 2 |
| Aesthetics 50, History and Appreciation of Art | 2 |
| Aesthetics 51, Survey of Mexican Art | 2 |
| Aesthetics 52A-52B, Survey of Oriental Art | 6 |
| Art 8, Costume and Home-furnishing | 2 |

Other courses which require certain skills but which are not beyond the ability of the average college student are:

| | |
|---|---|
| Art 61B, Crafts | 2 |
| Art 6A, Design | 2 |
| Art A, Drawing and Composition | 2 |
| Art 94, Costume design | 2 |

### Lower Division Courses

**Art A. Drawing and Composition** (2) I, II

Problems involving perspective to develop ability to draw still life, furniture, exteriors, interiors, and the like. (High school equivalent may excuse the student from this course.)

**Art B. Drawing and Composition** (2) I, II

Drawing of mechanical and natural forms by the use of line and value. Emphasis on proportion and structure. Some quick sketching, gesture and contour drawing. Prerequisite: Art A.

*** 6A. Furniture Design** (2) I, II

Fundamentals of design and composition and theory of color. Basic course used as a prerequisite for all advanced work.

**6B. Design** (2) I, II

Original work in creative design and representation with special stress on modern tendencies. Prerequisite: Art 6A.

**6D. Design** (2) I, II
Study of the principles of design through the making of furniture. Prerequisite: 6A.

**7. Line, Color and Display** (2) I, II
The principles of line, color and arrangement applied to store and window display. Study and observation of windows, color and materials used in display. Building models and practical problems in arranging colors, textures, and forms in windows to fit different kinds of merchandise. (Students taking this course for upper division credit, Art 107, will be required to do additional work.)

*8. **Costume and House Furnishings** (2) I, II
An appreciative study of modern architecture and modern house furnishings, with emphasis on the spirit of gracious living and an appreciative study of the modern dress with emphasis on suitability to the figure, the personality and the occasion.

**14A. Lettering** (2) I
Fundamental art principles applied to lettering. Practice for quick, accurate lettering; original problems using letters as design. Prerequisite: Art 6A.

**14B. Posters and Commercial Art** (2) II
The application of lettering to posters, newspaper and magazine advertising, and other forms of commercial art. The study of composition combined with lettering and special study of modern tendencies in publicity. Prerequisites: Art 6A, 14A.

**15A-15B. Life Drawing** (2-2) Year, I, II
Drawing from the nude model. Prerequisite: Art A-B.

**16A-16B. Painting** (2-2) I, II
Semester I: Composition of still life in oil. Semester II: Landscape and more advanced composition in oil. Prerequisite: Art A-B.

**17A-17B. Sculpture** (2-2) I, II
Creative design in such materials as clay, wood, stone, concrete, etc. Prerequisites: Art 6A-6B.

**61A. Crafts in the Elementary Schools** (2) I, II
A foundation course which develops unification of work of the elementary grades through activities and experiences. These experiences grow out of environmental activities. They include study and working of clay, lumber and tools, textiles, and cardboard construction. Prerequisite: Art 6A.

**61B. Crafts** (2) I, II
Problems involving the application of design principles to various fields—pottery, textiles, weaving, metal work, wood-carving, and book-binding. Prerequisite: Art. 6A.

**94A-94B. - Costume Design** (2-2) Year, I, II
Original designs of modern costumes suitable to the individual or to distinct types; the drawing of fashion figures; the rendering of fabrics and textures. Prerequisite: Art 6A.

**95A-95B. Interior Design** (See Art 195A-195B)

## Upper Division Courses

**106A-106B. Printmaking** (2-2) I, II
Study of print crafts which includes the making of linoleum blocks, wood engravings, etchings and lithographs. Prerequisites: Art A. B. 6A.

**106C. Illustration** (2) II
Same as 160A-B except that printmaking is applied to problems of book illustration. Prerequisites: Art A, B, 6A.

**106D. Advanced Furniture Design** (2) I, II
(See Art 6D) Prerequisite: Art 6D.

**107. Advanced Line, Color and Display** (2) I, II
(See course description under Art 7)

**111A-111B. Industrial Design** (2-2) Year, I, II
Design of objects for manufacture with reference to their use, materials, and in accordance with factory practices and machine techniques. Practice in the techniques of presentation, working drawings, renderings in perspective and scale models. Prerequisite: Art 6A-6B.

**112A. Design and Composition** (2) I
Imaginative organization of space by means of color, dark and light, perspective, and textures of various materials. Prerequisites: Art A-B, 6A-6B.

**112B. Design and Composition** (2) II
Continuation of Art 112A. Prerequisite: Art 112A.

**115A-115B. Life Drawing and Painting** (2-2) I, II
Drawing and painting from nude and costume models. Prerequisite: Art A-B.

**115C-115D. Advanced Life Drawing and Painting** (2-2) Year, I, II
Study of human figure in terms of form patterns. Prerequisite: Art 115A-115B.

**116A-116B. Advanced Painting** (2-2) Year, I, II
Painting in oil from still life, landscape, or models, stressing composition. Prerequisite: Art 16A or 16B.

**117A-117B. Advanced Sculpture** (2-2) Year, I, II
Creative design in such materials as clay, wood, stone, concrete, etc. Prequisites: Art 6A-6B and 17A or 17B.

**119A. Ceramics** (2) I
Building of pottery on the basic techniques of coil, slab, mold making, and slip casting. Ceramic sculpture, glazing and kiln operations: Art 6A.

**119B. Ceramics** (2) II
Study of glazes and elementary clay technology. Mold making, slip casting with application to individual creative problems. Prerequisite: Art 119A.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**194A-194B. Costume Design** (2-2) Year, I, II
For description, see Art 94A-94B. Prerequisite: Art 6A.

**195A-195B. Interior Design** (2-2) I, II
The consideration of the house as a unit; the arrangement of garden, house, floor plan, and furniture as functional and decorative problems. Prerequisite: Art A and 6A; 195A is a prerequisite for 195B.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**200A-200B. Special Problems** (2-2) I, II
A graduate course in which students may carry out projects in various fields of art under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply for work within a certain field after discussions with the art faculty.

**290. Bibliography** (1) I, II
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Pererquisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis or Project** (3) I, II
Guidance in the preparation of a project or thesis for the master's degree.

# ASTRONOMY

## IN THE DIVISION OF PHYSICAL SCIENCES

Major work is not offered in astronomy. Students desiring to prepare for advanced work in astronomy should include the following courses: Astronomy 1, 2, 3, 9, and 10; Mathematics 3A-3B, 4A-4B; Physics 4A-4B-4C; a reading knowledge of French and German.

Courses in astronomy may be used as part of the general science major for the general junior high school credential. For specific information, refer to the outline of requirements for the general science teaching major for this credential.

### Minor

A *minor in arts and sciences* is offered in astronomy. The minor consists of 15 to 22 units in astronomy, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in astronomy; however, astronomy may be used as part of the *general science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

***1. Descriptive Astronomy** (3) I, II

A cultural course planned to develop an appreciation of astronomy with emphasis on the solar system. Attention is given to the methods by which astronomical knowledge has been gained. A six-inch refractor and an eight-inch reflecting telescope are available for observation.

***2. Modern Astronomy** (3) II

A study of the stellar system in the light of modern research, especially photographic and spectrographic. Prerequisite: Astronomy 1 or permission of the instructor.

***9. Practice in Observing.** (1) I, II

A course designed to supplement Astronomy 1. The course will include constellation study, use of astronomical coordinates, and descriptive observations of celestial objects with the telescope. One three-hour evening laboratory period each week. Recommended: Astronomy 1 or concurrent registration in Astronomy 1.

**10. Advanced Observational Astronomy** (1) II

A continuation of Astronomy 9. More advanced problems in observing will be taken up such as the determination of latitude by observations of Polaris, transit observations, astronomical photography, etc. One three-hour evening laboratory period each week. Prerequisite: Astronomy 9.

**12. Elementary Navigation** (3) I

A study of compass corrections, time, line of position, use of celestial coordinates, etc. A few class hours devoted to the use of tables such as H.O. 214 for the solution of astronomical triangle. One laboratory period each week. Astronomy 1 desirable.

### Upper Division Courses

***101. Principles of Astronomy** (3) I (Not offered 1952-53)

A course designed particularly to provide background for teachers. It consists of two lectures and one laboratory period each week. Students will be required to become familiar with the prominent constellations, brighter stars in the sky, and with the general characteristics of the solar and stellar system.

**103. Astronomical Optics** (2) II

This course aims to acquaint the students with the optics and methods of testing of an astronomical telescope. The course consists of one lecture and one laboratory period each week. The student is required to grind a four-inch astronomical telescope mirror. Prerequisite: Astronomy 1 or permission of instructor.

***105. Historic Development of Astronomy** (3) I

A study of the more important problems and astronomical concepts in the light of their historical development. Particular attention is given to the biography and contributions of the more important astronomers, such as, Galileo, Kepler, Newton, Herschel, Bessel, etc.

**107. Method of Least Squares and Computing Practices** (3) I

Fundamental principles with applications in the fields of astronomy, physics, and engineering. Prerequisite: Math 4A or equivalent.

**110. Introduction to Study of Variable Stars** (3) II

A study will be made of the various types of variable stars, their spectra, periods, methods of observing, etc. In the laboratory the light curve of several typical variables will be observed. Two lectures and one laboratory period each week. Prerequisite: Astronomy 2. Astronomy 9 desirable.

**112. Elementary Astrophysics** (3) I (Not offered 1952-53)

A lecture course in the application of physics to astronomy: Much of modern astronomical research is in the field of astrophysics. An occasional laboratory period will be substituted by appointment for the lecture period. Prerequisites: Astronomy 2 or college physics.

**113. Surveyor's Course in Practical Astronomy** (3) II

The principles of spherical astronomy adapted to the needs of engineering students. Computation and observation. Two lectures and one three-hour laboratory period each week. Prerequisite: Engineering 1A or permission of the instructor. Astronomy 1 and 9 desirable.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisites: three units in astronomy and permission of instructor.

## BACTERIOLOGY
### IN THE DIVISION OF LIFE SCIENCES

A *major in arts and sciences* is offered in bacteriology for the A.B. degree. Courses in the major are in addition to 45 units in general education courses, except that nine units in natural science may be applied toward general education requirements. Lower division requirements: in the major, Bacteriology 1; in related fields, either Biology 3 and 4, or Zoology 1A-1B, or equivalent; Chemistry 1A-1B and Chemistry 5. Recommended: French or German, Math C and D or 7A-7B; Physics 2A-2B and 3A-3B; and Physiology 1A. Upper division requirements: 24 units in bacteriology and related fields to include Bacteriology 102, 103, Chemistry 101A, 114, and additional courses in bacteriology. Zoology 128 and 109 are recommended as courses to be included in the major. A minor is not required of students majoring in bacteriology.

A *major in arts and sciences* is offered in bacteriology for the B.S. degree. Courses in the major are in addition to 45 units in general education courses, except that nine units in natural science may be applied toward general education requirements. Lower division requirements: in the major, Bacteriology 1; in related fields, either Biology 3 and 4, or Zoology 1A-1B, or equivalent; Chemistry 1A-1B and Chemistry 5. Recommended: German or French, Math C and D or 7A-7B; Physics 2A-2B and 3A-3B; and Physiology 1A and 1C. Upper division requirements: 36 units in bacteriology and related fields to include Bacteriology 102, 103, four units of 105, 106, and 107; Zoology 128; and Chemistry 101A, 114, and 115. A minor is not required for the B.S. degree.

A *teaching major* is not offered in bacteriology; however, courses in bacteriology are included in the *major in life science and general science* for the general secondary credential and the *major in general science* for the junior high school credential. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *bacteriology*. The minor consists of 15 to 22 units in bacteriology to include Bacteriology 1 or 101, 102, 103, and the remainder of the units to be chosen from Bacteriology 105, 106, 107, and 199. Recommended courses to supplement the minor: Physiology 1A and 1C; Zoology 20; Chemistry 101A, 114, 115.

A *teaching minor* is not offered in bacteriology; however, bacteriology may be used as part of the *general science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials or as part of the *minor in life science and general science* for the general secondary credential. For specific information, refer to these credentials.

### Lower Division Courses

**1. General Bacteriology (4) I, II**

An introduction to bacteriology. Effects of physical and chemical agencies upon bacteria; biochemical activities of bacteria; microscopic examination and cultivation of bacteria; the bacteria of air, water, soil, milk and dairy products, other foods; industrial applications. Introduction to disease-producing bacteria. Two hours of lecture and six hours of laboratory per week. Prerequisite: Chemistry 1A or 2A. (Chemistry 1A-1B for minor in bacteriology.)

### Upper Division Courses

**101. General Bacteriology (4) I, II**

Lectures and laboratory work of Bacteriology 1 with additional work to be prescribed by the instructor. Prerequisite: Chemistry 1A or 2A. (Chemistry 1A-1B for minor in bacteriology.)

**102. Advanced Bacteriology (5) I**

A survey of the agents of disease and methods of host resistance. Laboratory experience in diagnosis and immunologic techniques. Two lectures and three laboratories per week. Prerequisites: Bacteriology 1 or 101, and Chemistry 101A. Recommended: Biochemistry, physiology.

**103. Serology (4) II**

A survey of the principles and techniques used in serological diagnosis of disease agents. The course is planned for students interested in research or laboratory technology. Two lectures and two laboratories per week. Prerequisites: Bacteriology 1 or 101, Bacteriology 102, and Chemistry 101. Recommended: Biochemistry, physiology.

**105. Bacterial Metabolism (2) I**

A course to provide a basic knowledge of the principles by which micro-organisms derive energy to support the life processes. Prerequisites: Bacteriology 1 or 101, Chemistry 101A. Recommended: Biochemistry, Bacteriology 102 and 103. This course is offered every third semester.

**106. Immunology. (2) II (Not offered in 1952-53)**

A lecture course dealing with the factors underlying virulence in microorganisms, and the mechanisms of bacterial infection. Specific and nonspecific antimicrobial immunity; the antigen-antibody reaction; and consideration of the immunochemistry of protein and nonprotein cell substances. Prerequisites: Bacteriology 102, Chemistry 101A. Recommended: Bacteriology 107, Chemistry 114. This course is offered every third semester.

**107. Virology (2) II**

A survey of viruses and Rickettsias as agents of disease. An introduction to virological techniques, and routes of infection with further consideration of concepts of epidemiology, diagnosis, pathology, and host-responses. Prerequisite: Bacteriology 102, 103, or equivalent.

**199. Special Study (1-6) I, II**

Individual study. Six units maximum credit. Prerequisites: 15 units of work in the life sciences (including courses in bacteriology) with grades of A or B; and permission of instructor.

### Graduate Courses

**290. Bibliography (1) I, II**

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study (1-6) I, II**

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis or Project (3) I, II**

Guidance in the preparation of a project or thesis for the master's degree.

# BIOLOGY

## IN THE DIVISION OF LIFE SCIENCES

Major or minor work is not offered in biology (see bacteriology, botany, and zoology); however, courses in biology may be used as part of the general science major for the general junior high school credential, or the general science minor for the general elementary, kindergarten-primary, and special secondary credentials, or the life science and general science minor for the general secondary credential.

### Lower Division Courses

**A. Solution and Dosage** (2) I

Arithmetic review with computing of dosage, percentage of solutions, apothecaries weights. Two hours per week.

***1. Survey of Biology** (3) I, II

A survey of life science with emphasis on the biology of man in relation to modern life. Three lectures per week. If laboratory credit is wanted by the student, Biology 3 should be taken instead of Biology 1; or Biology 1 may be followed by Biology 4. Not open to students with credit for Biology 3, 4, 10A, 10B, 40, Zoology 1A, 1B, Botany 2A, or 2B.

***3. Principles of Biology** (3) I, II

A consideration of basic biological phenomena. Two hours of lecture and three of laboratory each week. Not open to students with credit for Biology 1, 40, 10A, 10B; Botany 1, 2A, 2B; or Zoology 1A, 1B.

***4. Plant and Animal Types** (3) I, II

An introduction to the major groups of plants and animals with emphasis on local forms. Two hours of lecture and three of laboratory each week. Not open to students with credit for Biology 10B; Botany 1, 2A, 2B; or Zoology 1A, 1B. Prerequisite: Biology 1 or 3.

# BOTANY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in botany for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Botany 1 or 2A-2B, Chemistry 1A-1B or 2A-2B. Recommended: German, French or Spanish, Zoology 1A-1B, Bacteriology 1, and Geology 1A-1B or 2 and 3. Upper division requirements: A minimum of 24 upper division units, at least 18 units of which must be in botany and six of which may be related courses in bacteriology, chemistry, geology, zoology, selected with the approval of the departmental representative. Nine units in natural science may be applied toward general education requirements. Botany majors are not required to complete a minor.

A *major in arts and sciences* is offered in botany for the B. S. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: in the major, Botany 1 or 2A-2B; in related fields, Chemistry 1A-1B or 2A-2B. Recommended: German, French, or Spanish, Zoology 1A-1B, Bacteriology 1, and Geology 1A-1B or 2 and 3. Upper division requirements: 36 units in botany and approved related fields, to include Botany 102, 107, 114, 150, and 155. Chemistry 101A is strongly recommended. Nine units in natural science may be applied toward general education requirements. A minor is not required.

A *teaching major* is not offered in botany; however, courses in botany are included in the *major in life science and general science* for the general secondary credential and the *major in general science* for the junior high school credential. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in botany. The minor consists of 15 to 22 units in botany, six units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in botany; however, botany may be used as part of the *general science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials or as part of the *minor in life science and general science* for the general secondary credential. For specific information, refer to these credentials.

## Lower Division Courses

**1. Introduction to Botany** (4) I, II

Designed primarily for students who desire a general acquaintance with the fundamentals of botany. Not open to students who have credit for Botany 2A or 2B, but may be used as a prerequisite to upper division courses. Three lectures, and one three-hour laboratory per week.

**2A-2B. General Botany** (4-4) I, II

Year course covering fundamentals of structure, general behavior, morphology and relationship of plants, including an introduction to classification and distribution of seed plants. Two lectures and six hours of laboratory work per week. Botany 2A is a prerequisite for 2B.

**4. California Plants** (2) II (Not offered in 1952-53)

Classification and ecology of representative orders of wild flowers, trees, and chaparral of San Diego region, including practice in the use of keys. One lecture and three hours laboratory per week. Occasional Saturday field trips.

## Upper Division Courses

**102. Mycology** (4) I

A study of the different groups of fungi. Special attention will be given to the parasitic and economic forms, their life history, structure, and classification. Prerequisite: Botany 2B or Botany 1.

**107. Plant Physiology** (4) II

The activities of plants, including food manufacture, absorption, conduction, transpiration, respiration, growth and movement. Two lectures and two laboratory periods per week. Prerequisites: Botany 1 or Botany 2A, and Chemistry 2A-2B or equivalent.

**112. Cultivated Trees and Shrubs** (3) I

Recognition of the common cultivated trees and shrubs of the San Diego region. Trips to local parks and private gardens. One lecture and six hours per week laboratory or field work. Prerequisites: Botany 1, 2A-2B, 4, or equivalent.

**114. Plant Taxonomy** (3) II

Identification, classification and distribution of representative orders of flowering plants. One hour lecture and six hours per week of laboratory and field work. Prerequisites: Botany 1, or 2A-2B, or 4.

**119. Field Botany** (4) Summer

Study of the local native vegetation with emphasis on ecological units within floristic areas. Field trips to be supplemented with laboratory work in herbarium procedure.

**126. Plant Pathology** (3) II

A practical course dealing with the principles of disease in plants, control measures, and quarantine procedures. Emphasis is placed on the determination and control measures of those pathogenic organisms which affect crops, trees and shrubs and nursery stock. Two lectures and one laboratory period per week. Prerequisite: Botany 1 or 2A-2B and 102.

*** 150. Readings in Biology** (2) II

Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles,, ecology, economic zoology, zoogeography, breeding habits and animal behavior. Not open to students with credit for Zoology 150.

**153. Economic Biology** (2) I

Study of uses of plants and animals to man and their destructive effects. Consideration also given to general methods of control and conservation. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor. Not open to students who have credit for Zoology 153.

**155. Genetics** (3) II

Principles of plant and animal genetics, with experiments and demonstrations illustrating the mechanisms of heredity. Two hours of lecture and three hours of laboratory per week. Not open to students with credit for Zoology 155. Prerequisites: Biology 3 and 4, Zoology 1A-1B, or Botany 2A-2B.

**158. Conservation of Wildlife** (3) II

A survey of plant and animal resources with emphasis on their conservation and intelligent use. Prerequisite: a college course in biology or consent of the instructor. Not open to students with credit for Zoology 158.

*** 160. Evolution** (2) II

The development of theories of evolution. Two lectures per week. Prerequisite: Biology 1 or equivalent. Not open to students with credit for Zoology 160.

**162. Agricultural Botany** (2) I

A study of California crop plants, their general identification, cultural methods, and regional distribution. Field trips to be arranged. Prerequisite: Botany 1 or Botany 2A-2B.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisites: 15 units in botany with grades of A or B; and permission of instructor.

### Graduate Courses

**290. Bibliography** (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis or Project** (3) I, II

Guidance in the preparation of a project or thesis for the master's degree.

## BUSINESS COURSES

### IN THE DIVISION OF BUSINESS

The Division of Business consists of three departments: Accounting and Business Management; Marketing; and Business Education, Secretarial and Office Management. For complete descriptions of the major in business with the various fields of specialization, refer to these departments or to the business curricula in the section of the bulletin entitled: Preprofessional and Vocational Curricula.

All courses in business offered by the three departments in the Division of Business are listed below.

### Lower Division Courses

**A. Business Mathematics** (1) I, II

A practical course in the mathematics of business. A thorough study of interest, compound interest, discount, insurance rates, etc.

**1A-1B. Typewriting** (3-3) Year, I, II

Development of a command of a keyboard, acquisition of speed and the artistic arrangement of typewritten material with special reference to commercial forms, tabulation and billing. (1A is a prerequisite for 1B.)

**2. Mathematics of Finance** (3) I, II

Interest and annuities; amortization; sinking funds; valuation of bonds; depreciation; mathematics of building and loan associations. Prerequisites: Two years of algebra in high school, or equivalents.

**2A. Personal-Use Typewriting** (3) I, II

A short course designed for those not wishing to enter the business office but desiring a knowledge of or skills in the use of the typewriter. Five hours laboratory practice.

**3A. Office Machines: Rotary Calculator** (1) I, II

A six-weeks course designed to teach students the operation of the rotary calculator. Operations basic to statistics, accounting, and other areas needing this skill will be stressed.

**3B. Office Machines: Key-Driven Calculator** (1) I, II

Same as 3A, except the key-driven calculator is substituted for the rotary calculator.

**3C. Office Machines: Printing Calculator** (1) I, II

Same as 3A, except the printing calculator is substituted for the rotary calculator.

**4. Introductory Typewriting** (1) I, II

A short, introductory course building the fundamentals of typing in a six-weeks period. Students enroll for the first six weeks, the second six weeks, or the third six weeks in a semester. Not open to Business Education or Secretarial majors.

**5A-5B. Shorthand** (5-5) Year, I

An intensive course designed for the practical preparation of office secretaries. A thorough study of the Gregg System. Development of the ability to read and write shorthand rapidly and correctly, both literary and commercial. The shorthand speed necessary to pass a civil service examination is attained by the end of the year. (5A is a prerequisite for 5B.)

**6A-6B. Advanced Shorthand** (3-3) Year, I or II

Development of speed in writing and transcription. Advanced dictation on letter forms, legal forms, speeches, and literary and technical material. Prerequisite: Business 5A-5B or equivalent. (6A is a prerequisite for 6B.)

**8. Business Communication** (3) I, II

A course designed to give training in writing as a means of solving modern business problems. Prerequisites: English 1 and Business 2A or its equivalent.

**14A-14B. Principles of Accounting** (3-3) I, II

The balance sheet; profit and loss statement; the opening, conducting, and closing of books for different kinds of businesses; organizations, reorganizations, dissolutions, and consolidations, etc., keeping in view the best modern accounting practice. Five hours lecture and laboratory. (14A is a prerequisite for 14B.)

**18A-18B. Business Law** (3-3) I, II

The fundamental principles of business law. Cases showing the actual application of the principles to commercial and business transactions. The subjects covered: Contracts, sales, agency, negotiable instruments, insurance, and wills. Either semester may be taken first.

***20. Consumer Problems** (3) I, II

Consumer incomes; bases of consumer choice-making; practical problems of buying food, clothing, shelter, transportation, insurance, etc.; family budgeting; market structure and functions seen from the consumer's point of view. Not open to students with credit for Business 120. A general education course in family life education.

**21. Organization and Management of Small Business** (3) I

Problems confronting the small business man with regard to finance, organization, management. Reasons for failures and success in small business. Specific study of various kinds of small businesses.

**24. Retailing** (3) I, II

Study of retail stores, emphasizing the problems of store managers and merchandising executives; store location, organization, personnel, sales promotion, buying and handling of merchandise, inventory, turnover, and control methods. Problems of profitable operation under changing conditions.

**25. Salesmanship** (3) I, II

Theoretical and psychological backgrounds of salesmanship, newer concepts of selling; the selling of ideas and services; steps in a sale: Attention, interest, desire, closing; the development of clienteles and of good will; the personal factor in salesmanship.

**26. Applied Salesmanship** (2) II

Practice in selling; supervised work in cooperating stores, or outside selling; relationships between theory and practice. Prerequisite: Business 25 and permission of instructor.

**27. Advertising Principles** (3) I, II

Advertising as a sales promotional tool in marketing activities; consumer, market and product analysis; advertising media; preparation of advertisements; measurement of advertising effectiveness; economic and legal aspects of advertising; public relations; advertising campaigns.

**65A-65B. Record Keeping.** (1-3 each semester) Year, II

Application of accounting practice and principles to accounting practice; the technical arrangement of accounting forms, records and reports found in business. Prerequisite: Business 14A. Business 65A is a prerequisite for 65B.

### Upper Division Courses

**103A. Office Management** (3) I, II

A study of the functions of the office, duties of the office manager, organization of the office, communication functions, physical facilities involved, personnel relationships of management and worker, and the controls necessary for efficient output.

**105A. Office Systems** (3) I, II

A course designed to develop fundamental skills in the instructional figuring and bookkeeping machines used in offices, together with their interrelating functions as these affect office systems.

**105B. Office Systems** (3) I, II

The relationship of voice-writing, addressing, and duplicating machines to office procedures and routines is studied and skills developed in these areas of use.

**108. Records Management** (3) I, II

Intensive survey of the various means of preparing, keeping, storing, and disposing of office records to facilitate the efficient management of business. Various systems of records management will be studied together with the equipment and supplies required.

**113A-113B. Secretarial Office Practice** (5-5) Year, I

Practice in the duties and routines of office work as required of the stenographer and secretary with special emphasis on the shorthand dictation and transcription problems arising in various types of offices. Prerequisite: Business 1A-1B, 5A-5B, or their equivalent.

**118A-118B. Advanced Commercial Law** (3-3) Year, I, II

An advanced study of the law of personal and real property, partnership, corporation and the laws regulating trade and trade practices and competition. Elective for business majors.

**120. Consumer Income Management** (3) I, II

Functions and responsibilities of consumers; problems of choice-making; planning expenditures for housing, household operation, insurance and investments. Economics of installment buying, borrowing procedures, control of frauds, legislation affecting consumers. Not open to students with credit for Business 20.

**121. Business Management** (3) I, II

Problems of business management as an interrelated whole. A discussion of the problems of the business manager with particular reference to the character of the problems involved and to the control policies and devices of the manager. Prerequisite: Economics 1A-1B.

**123. Marketing Principles** (3) I, II

Study of marketing functions; activities of producers, wholesalers, retailers and other middlemen; channels of distribution; integration of marketing activities; price policies; government regulation. Prerequisite: Economics 1A-1B.

**124. Marketing Administration** (3) II

An advanced course dealing with practical aspects of marketing. Solutions of problems faced by producers, wholesalers, retailers and other middlemen in the marketing of their products. Prerequisite: Business 123.

**125. General Insurance** (3) I

Economic theory of risk; transfer of risk; distribution and prevention of loss; types of insurance carriers; problems of rate making; the insurance contract; coverages; special forms of life, fire, marine and casualty insurance; state supervision.

**126. Casualty Insurance** (3) II

The nature and reasons for existing practices in compensation and casualty insurance. The social and legal bases of insurance, fundamental principles of rate making, policy provisions, state regulation and state insurance. Prerequisite: Business 125.

**127A. Life Insurance—Principles and Practice** (3) I

Types of life insurance companies and associations, home office and agency organization, types of contracts, surrender value, policy loans and extended insurance, surplus and dividend policies, reserves, group, industrial and social insurance, and state supervision.

**127B. Life Insurance Salesmanship** (3) II

Special problems of life insurance selling, with emphasis on the psychological aspects of insurance selling, on specific techniques for finding prospects, for managing the sales interview. For students interested in life insurance selling, and those planning to obtain life underwriter's certification.

**128A-128B. Advanced Life Insurance** (3-3) Year, I

An advanced course in life insurance. The emphasis is on preparation for the C. L. U. Certificate. 128A is a prerequisite for 128B.

**128C-128D. Advanced Life Insurance** (3-3) I

Prepares the student for Part D of the Chartered Life Underwriters examination showing how life insurance strengthens banking credit, financial structure of corporations, and partnerships; also, life insurance as an investment. Business 128C is a prerequisite for Business 128D.

**128E-128F. Advanced Life Insurance** (3-3) Year, I

Prepares for part of the Chartered Life Underwriters examination. Covers the four sections, "Life Insurance Fundamentals," "General Education," "Law, Trust and Taxes," and "Finance"; teaches proficiency in the analysis of cases or problems. Business 128E is a prerequisite for Business 128F.

**133. Corporation Finance** (3) I, II

The corporate form of organization, instruments of long-time finance, methods of raising capital, efficient financial management, the financing of reorganizations, and governmental control. Prerequisite: Economics 1A-1B. Not open to students who have credit for Economics 133.

**134. Investments** (3) I

Investment principles and practices with emphasis upon problems of the small investor, such as tests of a good investment, sources of information, types of stocks and bonds, mechanics of purchase and sale, investment trusts, real estate mortgages, and the like.

**137. Credits and Collections** (3) I, II
The credit man and his work, including the instruments with which he works, sources of credit information, the technique of his department, collection methods, legislation for the protection of debtor and creditor, and credit insurance.

**153. Personnel Management** (4) I, II
Problems in the management of personnel relations, including techniques of selecting, training, supervising and rating employees. Methods used by management in job evaluation; wage and salary payment plans; employee services; health and safety; union relationships; stimulation of interest.

**154. Wage and Salary Administration** (3) II
Problems of job analysis; major techniques of job evaluation, including ranking, classification, point system, factor comparison; problems of wage and salary administration, incentive pay methods; merit rating plans. Not open to students with credit for Political Science 146.

**160A-160B. Advanced Accounting** (3-3) Year, I
An intensive study of the corporation, its accounting and financial problems; a thorough study of the balance sheet; depreciation; factory accounting, etc. Prerequisite: Business 14A-14B. (160A is a prerequisite for 160B.)

**161A-161B. Cost Accounting** (3-3) Year, I
Principles and methods of cost accounting in the mercantile establishment and in the factory. A study of industrial accounting procedure, the forms used, and their application to practical problems. 161A is a prerequisite for 161B.

**162. Accounting Systems** (3) II
The accounting systems used in various types of business and financial concerns. Some practice in devising and installing systems. Prerequisite: Business 14A-14B.

**163. Financial Statements** (3) II
The construction, composition, analysis and interpretation of accounting reports with particular emphasis on the form, content and phraseology of reports. Prerequisite: Business 160A-160B.

**164A-164B. Income Tax Procedure** (3-3) Year, I
A study of the laws and a consideration of the problems arising from state and federal income, inheritance and corporation tax. 164A is a prerequisite for 164B.

**165A-165B. Auditing** (3-3) Year, I
The fundamental principles of accepted procedures of auditing and related types of accounting engagements. 165A is a prerequisite for 165B. Prerequisite: Business 160A-160B.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**167. Governmental Accounting** (3) I
A comparative study of accounting systems used by municipalities, counties, and the State of California; detailed comparisons with commercial practice; procedures in handling budget accounts, appropriations, and encumbrances; subsidiary records; cost records; internal checks; auditing.

**169. C. P. A. Review** (3) II
An intensive review of the accounting principles and procedures covered in the accounting theory and accounting practice sections of the uniform C. P. A. examination prepared by the American Institute of Accountants. Prerequisite: Business 160A-160B, 161A-161B, 164A-164B, 165A-165B, 167.

**181. Radio Sales and Advertising** (3) I, II
A study of advertising trends in radio advertising; time buying, audience survey, and program types in relation to products to be advertised via radio broadcasting. Includes publicity and promotion of radio programming organization of a radio station; relationship between the business and entertainment factors of radio broadcasting. Prerequisite: Consent of the instructor. Not open for credit to students with credit in Speech Arts 181.

**184. Sales Management** (3) I

Consideration of problems confronting the modern sales executive; selection, training, compensation and control of the sales force; sales analysis; sales quotas; sales costs and budgets; market and product research and analysis; coordination of personal selling with other form of sales effort.

**185. Advertising Copy and Layout** (2) II

Introduction to principles and techniques of copy writing; types of copy; preparation of layouts; mechanical methods employed by the artist, engraver and printer; legislation and regulations affecting advertising claims. Prerequisite: Business 27, or permission of instructor. Not open to students with credit for Journalism 185.

**186. Store Management** (2) I

Retail locations, buildings, layouts and fixtures; store supplies and maintenance; receiving, marking, storing, wrapping and delivering merchandise; customer service, adjustments, credit and collections; expense control. Prerequisite: Business 24, or permission of instructor.

**187A. Buying Techniques** (2) I

Buying for department and specialty stores; customer demand; functional bureaus that aid in buying; stock plans; merchandise resources; foreign buying; trading techniques; terms and discounts; credit and shipping terms; the regulation of trade practices. Prerequisite: Business 24, or permission of instructor.

**187B. Merchandising Techniques** (2) II

Methods of dollar and unit control in retail stores; pricing, turnover, inventory methods and control; legislation; budgets; arithmetic of merchandising; profitability of specific methods of merchandising. Prerequisite: Business 24, or permission of instructor.

**188. Advertising Media** (2) I

A thorough coverage of advertising media. Market characteristics; rates and sources of information; evaluation of media; problems of coverage, duplication, costs and scheduling; advertising salesmanship. Prerequisite: Business 27, or permission of instructor.

**189. Advertising Problems** (3) I

Principles of advertising applied to the solution of actual advertising problems encountered by business firms. Estimating opportunities for effective use; promotional campaigns; selection of media, retail advertising, national advertising, advertising agencies; advertising services of publishers. Prerequisite: Business 27, or permission of instructor.

**190. Objectives and Curricula in Business Education** (3) II

A study of the objectives of business education and a detailed analysis of the factors involved in the construction of a business curriculum.

**196. Work Experience** (2) I, II

Supervised work in cooperating stores or offices; relationship between theory and practice in specific business conditions. Prerequisite: Permission of instructor.

**198A-198B. Investigation and Report** (1 to 3 each semester) I, II

A comprehensive and an original study of a problem connected with business under the direction of one or more members of the business staff. Prerequisite: Senior standing and permission of the instructor. 198A is a prerequisite for 198B.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## Graduate Courses

**200. Readings in Current Literature in Business Education** (2) I

Specialized reading in one or more phases of business education, followed by a discussion and written report of the value of each article read.

**203. Office Management (2)**
An intensive study of the problems of office management and their solution. The relation of records, reports, budgets and manuals to managerial control. Prerequisites: Business 14A-14B, 103A.

**213. Problems in Business Education (2) II**
Designed to fit the needs of individual students and their problems through the writing of research papers, of a term or individual study nature. The studies to be made will cover the principles of good teaching, trends in Business Education, current literature.

**221. Basic Business Education (2)**
An introduction to the content and methodology of teaching basic Business Education.

**223. Problems of Distributive Business (2)**
Critical analysis of distributive business problems in the light of changing economic, social and governmental conditions. Prerequisite: Business 121, 123.

**233. Administration and Supervision of Business Education (2) I**
Designed to provide students who hold, or who expect to hold, administrative positions in Business Education with the techniques necessary for successful executive work.

**260. Advanced Problem Analysis (Accounting) (2)**
The study of conditions causing various accounting problems with special emphasis upon the theory and practices involved in their solution. Prerequisite: Business 160A-160B, 161, 165.

**290. Bibliography (1)**
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study (1-6) I, II**
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis or Problem (3)**
Guidance in the preparation of a project or thesis for the master's degree.

## BUSINESS EDUCATION, SECRETARIAL AND OFFICE MANAGEMENT

### IN THE DIVISION OF BUSINESS

### Major

A *major in arts and sciences* is offered in *business* for the B.S. degree. Students majoring in this department, with business as the major, may specialize in one of the following subfields: (A) *General Business;* (B) *Secretarial;* or (C) *Office Management.* Courses in the major are in addition to 45 units in general education courses. A minor is not required for the B.S. degree.

The student majoring in business must complete the requirements in one of the following fields of specialization:

(A) **General Business:** Lower division: Business 1A-1B, 8, 14A-14B, 18A-18B, plus the requirements in one of the following subfields:

  (1) *Accounting:* Nine units selected from Business 2, 21, 24, 25, 27.
  (2) *Accounting-Secretarial:* Business 5A-5B, or nine units selected in consultation with the adviser if the student has the equivalent of 5A-5B.
  (3) *Merchandising:* Business 24, 25, 27.
  (4) *Secretarial:* Business 5A-5B, or nine units selected in consultation with the adviser if the student has the equivalent of 5A-5B.

Upper division requirements: 36 upper division units to include Business 103A, 105A-105B, 108, and 24 units selected from courses in one of the following subfields which corresponds to the lower division preparation:

(1) *Accounting:* Business 121, 160A, 164A, and 15 units selected with the approval of the adviser from the following recommended courses: Business 123, 125, 133, 134, 137, 153, 154, 160B, 161A, 161B, 185; Economics 135, 140, 150, 170.

(2) *Accounting-Secretarial:* Business 121, 160A, 164A, or 113A-113B; and 11-15 units selected with the approval of the adviser from the following recommended courses: Business 123, 125, 134, 153, 154, 160B, 161A, 161B, 164B; Economics 150, 170.

(3) *Merchandising:* Business 121 and seven units selected from Business 185, 186, 187A, 187B, and Art 107; and 14 units selected with the approval of the adviser from the following recommended courses: Business 120, 123, 124, 125, 134, 137, 153, 154, 184; Economics 150, and 170.

(4) *Secretarial:* Business 113A-113B, and 14 units selected from the following recommended courses: Business 120, 121, 123, 125, 134, 153, 154, 164A, 185; Economics 150, and 170.

(B) **Secretarial:** Lower division: Business 1A-1B, 5A-5B, 8, 14A-14B, 18A-18B. Upper division: 39 upper division units consisting of the following courses: Business 103A, 105A-105B, 108, 113A-113B, 125, 134, 153, 164A, 185, 196.

(C) **Office Management:** Lower division: Business 1A, 2A (or equivalent), 2, 8, 14A-14B, 18A-18B. Upper division: 42 upper division units consisting of the following courses: Business 103A, 105A-105B, 108, 121, 137, 153, 154, 160A, 161A, 196; Economics 140, 170; Psychology 121.

### Major for Teaching Credentials

A teaching major in business education is offered for the special secondary and the general secondary credentials. For a statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *business* with specialization in one of the subfields listed under the major above. The minor consists of 18 to 22 units to include Business 14A-14B and either Business 1A-1B or Economics 1A-1B; and six or more upper division units selected from courses in one of the subfields, A or B or C, listed under the major above.

A *teaching minor in business education* is offered for the general secondary credential. For a statement of requirements, refer to this credential.

### Courses in Business Education, Secretarial, and Office Management

The descriptions for all courses in business offered by the Department of Business Education, Secretarial and Office Management are listed in this section of the bulletin under Business Courses.

## CHEMISTRY

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in chemistry for the A.B. and for the B.S. degrees. Courses in the major are in addition to 45 units in general education courses. These curricula are outlined below.

A *teaching major in physical science and general science* is offered for the general secondary school credential and a *teaching major in general science* is offered for the general junior high school credential. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in chemistry. The minor consists of 15 to 22 units, six units of which must be in courses carrying upper division credit. Chemistry 1A-1B, or its equivalent, must be included in the minor.

A *teaching minor in physical science and general science* is offered for the general secondary, special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Curricula for Chemistry Majors in Arts and Sciences

The curriculum outlined below for the B.S. degree is based upon the recommendations of the Committee for Professional Training of Chemists of the American Chemical Society. It qualifies graduates for many types of positions as chemists and provides the training required by most universities for admission to graduate work in chemistry. This department is on the approved list of the American Chemical Society. Students may also arrange a program which leads to the A.B. degree and meet the recommendations of the American Chemical Society and the requirements of most universities for admission to graduate work in chemistry.

The final curriculum outlined below for the A.B. degree is designed for students who do not intend to become professional chemists, but who desire the major in chemistry as part of a general education or in preparation for training in a related profession. By proper choice of electives, graduates can meet the requirements for admission to medical schools. The sequence of courses listed below represents the minimum technical requirement for an A.B. degree with a major in chemistry. A minor is required of chemistry majors taking the A. B. degree. A minor is not required for the B. S. degree.

### Plan for B.S. Degree and Certificate of the American Chemical Society

| | Units | |
|---|---|---|
| *First year* | *1st Sem.* | *2d Sem.* |
| Chemistry 1A-1B | 5 | 5 |
| Physics 4A | – | 4 |
| Mathematics 3A-3B | 3 | 3 |
| * Health Education 21 | 2 | – |
| * Psychology 1 | – | 3 |
| * Biology 1 or 3 | 3 | – |
| * English 1 | 3 | – |
| * P. E. activity | ½ | ½ |
| | 16½ | 15½ |

| | Units | |
|---|---|---|
| *Second year* | *1st Sem.* | *2d Sem.* |
| Chemistry 5A-5B | 4 | 4 |
| Physics 4B-4C | 4 | 4 |
| Mathematics 4A-4B | 3 | 3 |
| †* German 1, 2 | 3 | 3 |
| * Speech Arts 3 | 2 | – |
| * Social Science | – | 3 |
| * P. E. activity | ½ | ½ |
| | 16½ | 17½ |

| *Third year* | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Chemistry 101A-101B | 4 | 4 |
| Chemistry 102A-102B | 1 | 1 |
| Chemistry 110A-110B | 3 | 3 |
| † German 8A-8B | 3 | 3 |
| * Social Science | 3 | 3 |
| * Lit., Phil., and Arts | 3 | – |
| | 17 | 14 |

| *Fourth year* | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Chemistry 111 | – | 3 |
| ‡ Advanced Chemistry | 9 | 8 |
| * Lit., Phil., and Arts | 3 | – |
| Electives | 4 | 4 |
| | 16 | 15 |

* General education courses (nine units of chemistry, physics, and mathematics may be applied toward general education requirements.)

† The B.S. degree may be obtained without the Certificate of the American Chemical Society by substituting for the German courses, six units of general education courses and six units of electives.

‡ Must include four units lecture and one unit laboratory in chemistry courses requiring three full year-courses in chemistry as prerequisites. Remainder may include courses in related subjects by approval of department.

## Plan for A.B. Degree and Certificate of the American Chemical Society

| | Units | |
|---|---|---|
| *First year* | *1st Sem.* | *2d Sem.* |
| Chemistry 1A-1B | 5 | 5 |
| Physics 4A | – | 4 |
| Mathematics 3A-3B | 3 | 3 |
| * Health Education 21 | 2 | – |
| * Psychology 1 | – | 3 |
| * Biology 1 or 3 | 3 | – |
| * English 1 | 3 | – |
| * P. E. activity | ½ | ½ |
| | 16½ | 15½ |

| | Units | |
|---|---|---|
| *Second year* | *1st Sem.* | *2d Sem.* |
| Chemistry 5A-5B | 4 | 4 |
| Physics 4B-4C | 4 | 4 |
| Mathematics 4A-4B | 3 | 3 |
| †* German 1, 2 | 3 | 3 |
| * Speech Arts 3 | 2 | – |
| * Social Science | – | 3 |
| * P. E. activity | ½ | ½ |
| | 16½ | 17½ |

| *Third year* | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Chemistry 101A-101B | 4 | 4 |
| Chemistry 102A-102B | 1 | 1 |
| Chemistry 110A-110B | 3 | 3 |
| † German 8A-8B | 3 | 3 |
| * Social Science | 3 | 3 |
| * Lit., Phil., and Arts | 3 | – |
| | 17 | 14 |

| *Fourth year* | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Chemistry 111 | – | 3 |
| ‡ Chemistry electives | 2 | 3 |
| Minor (U. D.) | 6 | 3 |
| * Lit., Phil., and Arts | 3 | 4 |
| Electives | 3 | – |
| | 14 | 13 |

* General education courses (nine units of chemistry, physics, and mathematics may be applied toward general education requirements.)

† The A.B. degree may be obtained without the Certificate of the American Chemical Society by substituting for the German courses, six units of general education courses and six units of electives.

‡ Must include four units lecture and one unit laboratory from courses requiring three full year-courses in chemistry as prerequisites.

## Plan for A.B. Degree for Related Professions

| | Units | |
|---|---|---|
| *First year* | *1st Sem.* | *2d Sem.* |
| Chemistry 1A-1B | 5 | 5 |
| * Physics 2A-2B | 3 | 3 |
| * Physics 3A-3B | 1 | 1 |
| * Mathematics 7A-7B | 3 | 3 |
| * English 1 | 3 | – |
| * Psychology 1 | – | 3 |
| * P. E. activity | ½ | ½ |
| | 15½ | 15½ |

| | Units | |
|---|---|---|
| *Second year* | *1st Sem.* | *2d Sem.* |
| Chemistry 5A-5B | 4 | 4 |
| †* French or German | 3 | 3 |
| * Speech Arts 3 | 2 | – |
| * Health Education 21 | – | 2 |
| * Biology 1 or 3 | 3 | – |
| * Lit., Phil., and Arts | – | 3 |
| Elective | 3 | 3 |
| * P. E. activity | ½ | ½ |
| | 15½ | 15½ |

| *Third year* | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Chemistry 101A-101B | 4 | 4 |
| Chemistry 102A-102B | 1 | 1 |
| Chemistry 110A-110B | 3 | 3 |
| * Social Science | 3 | 3 |
| * Lit., Phil., and Arts | 3 | – |
| * Elective | 3 | – |
| Minor | – | 3 |
| | 17 | 14 |

| *Fourth year* | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Chemistry 111 | – | 3 |
| Chemistry electives | 3 | 2 |
| * Social Science | 3 | – |
| Minor | 3 | 3 |
| Electives | 7 | 7 |
| | 16 | 15 |

* General education courses.

† Six units of general education courses may be substituted for the French or German.

### Lower Division Courses

**1A-1B. General Chemistry** (5-5) Year, I, II

General principles of chemistry with emphasis on inorganic materials. Three lectures and six hours of laboratory per week. Qualitative analysis is included in the second semester. Prerequisites: Elementary algebra and plane geometry. Recommended: High school chemistry, physics, and additional mathematics.

***2A-2B. Fundamentals of Chemistry** (3-3) Year, I

A general course including inorganic, organic, and biological chemistry for students not intending to take further work in chemistry. Emphasis is placed on applications of chemistry to everyday life. Two lectures and one laboratory period per week. Not open to students with credit for Chemistry 1A-1B.

**5A. Elementary Quantitative Analysis** (4) I

Theoretical consideration of the principles of gravimetric and volumetric analysis. Practice in standardizing reagents and analyzing samples. Two lectures, and two laboratory periods per week. Prerequisite: Chemistry 1A-1B, and facility in the use of logarithms and slide rule.

**5B. Quantitative Analysis** (4) II

Further work in the theory and practice of volumetric and gravimetric analyses and the study of electro analytical methods. Two lectures and two laboratory periods per week. Prerequisite: Chemistry 5A.

### Upper Division Courses

**101A-101B. Organic Chemistry** (4-4) Year, I

The first semester lecture stresses aliphatic compounds and includes an introduction to aromatic compounds. The second semester stresses the aromatics, continues with more complex aliphatics and introduces mechanisms of organic reactions. The laboratory work includes development of technique and the synthesis of typical aliphatic and aromatic compounds. Three lectures and three hours of laboratory per week. Prerequisite: Chemistry 1A-1B. (Chemistry 101A-101B and 102A-102B replace the former courses in Chemistry 101, 102, and 103.)

**102A-102B. Organic Chemistry Laboratory** (1-1) Year, I

Synthesis of typical aliphatic and aromatic compounds. Study of the theory and practice of laboratory operations. Three hours of laboratory per week. Must be taken concurrently with 101A-101B.

**105. Advanced Quantitative Analysis** (4) II

Advanced work in the theory and practice of volumetric, gravimetric, and electroanalysis. Prerequisite: Chemistry 5A. Not open to students with credit for Chemistry 5B.

**110A-110B. Physical Chemistry** (3-3) Year, I

Theoretical principles of chemistry with emphasis on mathematical relations. Three lectures per week, problems and reports. Prerequisites: Physics 2A-2B, or equivalent; Math. 4B, or equivalent; Chemistry 5A-5B.

**111. Physical Chemistry Laboratory** (3) II

Physico-chemical apparatus and measurements, with emphasis on technical report writing. Discussion period and three laboratory periods per week. Prerequisite: Chemistry 110B, or concurrent registration with permission of the instructor.

**114. Biochemistry** (3) I

The chemistry of carbohydrates, fats, proteins, enzymes, vitamins and hormones. Nutrition, intermediary metabolism and chemotherapy are discussed. Three lectures per week. Prerequisite: Chemistry 103 or by permission of the instructor. Recommended: Elementary biology or zoology.

**115. Biochemistry Laboratory** (2) II

Laboratory work in the testing, synthesis, isolation and analysis of biochemical materials. Chemical rather than biological considerations are emphasized. Two laboratory periods per week. Prerequisites: Chemistry 5A and credit or registration in Chemistry 114. Recommended: Chemistry 155.

**116. Clinical Chemistry** (3) II

Lectures and laboratory work on the chemical composition of blood, urine, milk and body tissues. One lecture per week and two laboratory periods per week. *Open primarily* to students enrolled in the Laboratory Technician Curriculum. Prerequisite: Chemistry 115.

**118. Colloid Chemistry** (2) II (Offered 1951-52 and alternate years)

The theoretical principles of colloid chemistry and the preparation, properties and practical applications of colloids. Two lectures per week. Prerequisite: Chemistry 101, 110A and 110B.

**122. Glass Blowing** (1) II

Elementary training in the manipulation of glass. Prerequisite: Chemistry 1A-1B. One laboratory period per week.

**127. Advanced Inorganic Chemistry** (3) II
(Offered 1952-53 and alternate years)

A lecture course dealing with such topics as the physical basis of the periodic system, complex inorganic compounds, and the nature of the chemical bond. Three lectures per week. Prerequisite: Three years of chemistry.

**144A-144B. Principles of Chemical Engineering** (3-3) Year, I
(Offered 1952-53 and alternate years)

Industrial stoichiometry, flow of fluids, heat transfer, unit processes and types of industrial equipment. Three lectures per week, problems and reports. Prerequisite: Credit or registration in Chemistry 110A-110B.

**154. Organic Qualitative Analysis** (3) II

A systematic study of the identification of organic compounds and mixtures. One lecture and two laboratory periods per week. Prerequisite: Chemistry 5B or 105, 102 and 103.

**155. Instrumental Methods of Analysis** (3) I

Theory and practice of modern methods of instrumental analysis, including use of pH meters, colorimeters, spectro-photometers, and other analytical devices. Discussions, reports, field trips, special individual projects. One lecture and two laboratory periods per week. Prerequisite: Three year-courses in chemistry.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisites: open only to students who have shown ability to do A or B work in chemistry; permission of instructor.

### Graduate Courses

**200. Seminar** (2-2) I, II

An intensive study of some phase of advanced chemistry.

A. Advanced Organic Chemistry
B. Chemical Kinetics
C. Chemical Thermodynamics
D. Molecular Structure
E. Electrochemistry
F. Advanced Biochemistry
G. Spectrographic Analysis
H. Photochemistry
I. History of Chemistry

**290. Bibliography** (1) I, II

Exercise in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3) I, II

Guidance in the preparation of a project or thesis for the master's degree.

# COMPARATIVE LITERATURE

## IN THE DIVISION OF LANGUAGES AND LITERATURE

Major work is not offered in comparative literature; however, courses in this field may be used as part of the English major in arts and sciences. For specific information, refer to English.

Courses in comparative literature may be used as part of the teaching major in English for the general secondary and general junior high school credentials with the approval of the departmental representative. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in comparative literature. The minor consists of 15 to 22 units in comparative literature, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in comparative literature; however, courses in this field may be used as part of the teaching minor in English for the general secondary, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

*** 52A-52B. Masterpieces of World Literature** (3-3) Year, I

A chronological survey from Homer to modern times. The first semester stresses the classical epic and tragedy. The second semester, beginning with the Renaissance, stresses prose fiction, the drama, and the essay. Not open to students with credit for English 52A-52B.

### Upper Division Courses

*** 101A. Modern Continental Fiction** (3) II

A survey of leading French, Russian, Scandinavian, Italian, and German novelists and short story writers, from Tolstoy and his associates to the present day. Not open to students with credit for English 101A.

*** 104A-104B. Spanish-American Literature** (3-3) I

For a description of this course, see Spanish 104A-104B, which may be taken for credit in Comparative Literature by doing the required reading in English translation.

*** 115. The Bible as Literature** (3) I

A study of the narrative, poetry, and prophecy of the King James version of the Bible. Readings, reports, lectures, and discussions. Not open to students with credit for English 115.

*** 138. Introduction to Aesthetic Appreciation** (1) I

Major forms of expression and aesthetic experience in art, music and literature, presented by an interdepartmental staff through lectures, demonstration, and panel discussions. Not open to students with credit for Aesthetics 138.

*** 140A-140B. Masterpieces of French Literature** (3-3) Year, I
(Not offered in 1952-53)

A cultural course designed to be given in introduction to the great French works from the Song of Roland through Cyrano de Bergerac, with emphasis on the 16th, 17th, 18th and 19th century authors. The contributions to world thinking of Rabelais, Montaigne, Moliere, Racine, Descartes, Pascal, Montesquieu, Voltaire, Rousseau, Hugo, Balzac, Flaubert, Maupassant, Zola, will be studied through lectures and outside readings.

*** 142. The Golden Age of German Literature** (3) II

Masterpieces of German Literature from the 18th and early 19th centuries. English translations read. No knowledge of German required.

*** 152A-152B. Survey of Drama** (3) Year, I
Study of selected tragedies and comedies from Asiatic, European, English, and American literature, with emphasis upon the human problems depicted therein and upon the timelessness of certain themes, such as those of Electra and Medea. Lectures, discussions, and reports on readings. Not open to students with credit for English 152A-152B.

**159. The Rise of Romanticism in European Literature** (3) II
Continental origins and growth of the romantic movement. Studies in the works of Rousseau, Goethe, Schiller, Lessing, Chateaubriand, Mme. de Stael, and others.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

# ECONOMICS

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *economics* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Economics 1A-1B; Business 14A-14B. Upper division requirements: 24 units in economics to include Economics 100A, 100B and 140. Six of the 24 units may be in related fields, selected with the approval of the departmental adviser. A minor is required.

A *teaching major in social sciences* is offered for the general secondary and general junior high school credentials. For a description of these majors, refer to the credentials.

### Minor

A *minor in arts and sciences* is offered in *economics.* The minor consists of 15 to 22 units in economics, nine units of which must be in courses carrying upper division credit.

A *teaching minor in economics* is offered for the general secondary school credential or as part of the *social science minor* for the special secondary, general elementary, and kindergarten-primary credentials. For a statement of requirements, refer to these credentials.

### Lower Division Courses

*** 1A-1B. Principles of Economics** (3-3) Year, I, II
The basic principles of economics: Business organization and production; money, credit and banking, depression problems; prices, competition, and monopoly; income distribution; public finance; international trade; economic systems. Aims of course: Foundation for further study, business pursuits, and intelligent economic citizenship. Prerequisite: 1A prerequisite for 1B.

### Upper Division Courses

**100A. Intermediate Economic Theory** (3) I
Advanced economic theory with special reference to value and distribution, the income approach and full employment policy. Prerequisite: Economics 1A-1B.

**100B. Intermediate Economic Theory** (3) II
Advanced economic theory with special reference to the application of economic theory to national and local economic problems. Prerequisite: Economics 1A-1B.

*** 102. Comparative Economic Systems** (3) II
The economic aspects of laissez-faire and regulated capitalism, cooperatives, socialism, communism, nazism, fascism. Experience in Russia, Germany, United States, Great Britain. Criteria for evaluating economic systems. The individual and government in each system. Planning in a liberal capitalistic society.

**105. Economics of Consumption** (3) I (Not offered in 1952-53)
An analysis of the determination of consumer demands, the relationship of the consumer to the price system, the effects of consumption and saving upon income and employment, the effects of monopoly and advertising upon consumers' welfare.

**110. Economic History of Europe** (3) I
A general survey of economic development from the Middle Ages to the present. Particular attention is given to the impact of the Industrial Revolution on national economics, especially on England's commerce and industry.

*** 111. Economic History of the United States** (3) II
A comprehensive survey of American economic development and of national legislation in the field of industry and commerce.

**127. Agricultural Economics** (3) II (Not offered in 1952-53)
Major problems of finance, markets, conservation, overproduction, economic institutions and governmental policy, in relation to agriculture. Emphasis on regional problems.

**128. Urban Land Economics** (3) I
Real estate in its various aspects: Property rights, transfer of title, valuation, finance, selling, property management, taxation, insurance, city planning, etc., with special emphasis upon problems as they exist in San Diego.

*** 131. Public Finance** (3) II
Principles and practices of taxation and public expenditures. Economic effects of public spending, debts and taxation. Financing social security and other services. Fiscal policy and prosperity. Relation to inflation and deflation. Special emphasis on social problems involved.

**133. Corporation Finance** (3) I, II
The corporate form of organization; instruments of long-time finance; methods of raising capital, efficient financial management, financing of reorganizations, and government control. Not open to students who have had Business 133.

**135. Money and Banking** (3) II
The elements of monetary theory. History and principles of banking with special reference to the banking system of the United States.

**140. Statistical Methods** (3) I, II
Statistical method in the social sciences. Tabular and graphical presentation. Frequency and time series analysis. Index numbers and correlation techniques. Prerequisite: Mathematics A-B, and C, or equivalent. Not open to students with credit for Sociology 103, Psychology 104A, 104B.

**142. Business Cycles** (3) I
Fundamental factors in business cycles are analyzed and cycle theories are examined. Study of current business conditions begins early in the course and develops into practical application of forecasting methods to both business and other data. Prerequisite: Economics 1A-1B.

**150. Labor Problems** (3) I
A study of labor organizations and their policies, wages, strikes, unemployment, social insurance, child labor, labor legislation, plans for industrial peace, and other labor problems.

**151. Principles of Labor Legislation** (3) II
Federal, state and local laws and regulations concerning labor problems, industrial relations, and governmental policies with respect to labor; important court decisions; social security.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

***170. Government and Business** (3) I, II

General survey of governmental activities affecting business; the state as an entrepreneur and manager; governmental assistance to business; governmental regulation of business in its historical, legal and economic aspects, including recent developments in the United States and abroad; proposed policies.

**171. Transportation** (3) I (Not offered in 1952-53)

The development of railway transportation; railroad financing; rates and rate making; governmental regulation; government operation of railroads during the war; recent development of motor and air transportation. Prerequisite: Economics 1A-1B.

**172. Public Utilities** (3) II (Not offered in 1952-53)

The growth of public utilities in the United States; economics of public utility rates; valuation; public regulation and its legal basis; public ownership. Prerequisite: Economics 1A-1B.

**185. Social Insurance** (3) I (Not offered in 1952-53)

Old age pensions, health insurance, unemployment insurance, and Social Security Act. Strength and weakness of existing systems.

**190. International Economics—Principles** (3) I

National welfare and foreign trade. Principle of comparative costs, comparative advantages in various nations. Foreign exchange and the balance of payments, financing foreign trade. Regulations over trade and obstructing factors. Techniques of exporting and importing. Doctrines of international trade.

**195. International Economics—Problems** (3) II

Important aspects of international cooperation and conflict in the economic sphere, conditions essential to future cooperation. The quest for foreign markets, raw materials, investment opportunities and population outlets. Commercial policies, international economic conferences and organizations. Colonial rivalries and postwar problems.

**198. Investigation and Report** (3) I, II

Designed to stimulate independent study and investigation; to furnish guidance in the collection, organization, and presentation of factual material; to improve the technique of term reports. For economics majors only.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## Graduate Courses

**200A-200B. Seminar in the Development of Economic Thought** (2-2) Year I, II

A critical study of the development of economic thought and of contemporary economic thought, in order to provide a clearer understanding of major economic problems of the day.

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

# EDUCATION

## IN THE DIVISION OF EDUCATION

### Major

A *teaching major in education* is offered for the general elementary and kindergarten-primary credentials. For a statement of requirements, refer to these credentials. A major in education is not offered in arts and sciences.

### Minor

A *minor in arts and sciences* is offered in *education*. This minor consists of 15 to 22 upper division units in education selected with approval of the chairman of the Department of Education.

A *teaching minor* is not offered in education.

Students will be admitted to education courses only when they are admitted to teacher education or have permission from the chairman of the Department of Education. Experienced teachers may take education courses for which they have the prerequisites. Students who take a minor in education must have been regularly admitted to teacher education. (See Admission to Teacher Education.)

### Lower Division Courses

**A. Review of Arithmetic** (0) I, II

**H. Review of Handwriting** (0) I, II

**R. Review of Reading** (0) I, II

**S. Review of Spelling** (0) I, II

Noncredit courses designed to increase competence in the skill subjects. For students who do not qualify on the respective sections of the Fundamentals Test required of all applicants to teacher education.

### Upper Division Courses

**100B. Methods and Materials of Instruction and Audio-Visual Aids**
Major (2) Minor (2)

Professional courses in specific teaching fields taken just prior to or concurrently with the first directed teaching assignment. Each course emphasizes the application of best practice with reference to each subject area named.

Subject fields for sections in 100B are as follows:

**Offered in the Fall Semester**

100B-A.—Methods in Art
100B-B.—Methods in Accounting
100B-E.—Methods in English
100B-HE.—Methods in Home Economics
100B-L.—Methods in Romance Language
100B-Ma.—Methods in Mathematics
100B-Me.—Methods in Merchandising
100B-Mu.—Methods in Music
100B-PE.—Methods in Phys. Ed. (Men)
100B-P.Sc.—Methods in Physical Science
100B-S.—Methods in Shorthand
100B-SA.—Methods in Speech Arts
100B-S.Sc.—Methods in Social Science
100B-SS.—Methods in Secretarial Subjects
100B-T.—Methods in Typing

**Offered in the Spring Semester**

100B-E.—Methods in English
100B-IA.—Methods in Industrial Arts
100B-L.Sc.—Methods in Life Science
100B-PE.—Methods in Phys. Ed. (Women)
100B-S.Sc.—Methods in Social Science

**102A. Measurement and Evaluation in Elementary Education** (3) I, II, Summer

The use of intelligence and achievement tests in the diagnosis and improvement of learning; construction of objective examinations; problems of evaluation in education; the elements of statistical techniques. Should follow 102B for elementary candidates.

**102B. Child Growth and Development** (3) I, II, Summer

Study of the mental, emotional, social, and physical development during childhood and early adolescence. Directed observation required. General education course in family life education. Should precede 102A for elementary candidates.

**102C. Growth and Development of the Adolescent** (3) I, II or Summer

Study of adolescent physiological, psychological, social, and emotional development, including principles of mental hygiene and guidance. Field work with adolescent groups in the community is required.

**102D. Measurement and Evaluation in Secondary Education** (2) I, II or Summer

Problems of evaluation in secondary education, construction of examinations, the elements of statistics, the selection and interpretation of standardized measures, and appraisal of audio-visual instructional materials. Field work required. Prerequisite: Education 130.

**105A. Introduction to Psychological Testing** (3) I, II

The basic principles of testing. The selection and critical evaluation of group tests of intelligence, personality, aptitude, interest and achievement. Prerequisite: One of the following courses: Psychology 5, 11; Education 102A, 102D. Not open for credit to students with credit for Psychology 105A.

**E112A. Methods in Teaching Americanization Classes** (2) Extension only

Methods used in teaching the various grade levels found in Americanization classes, including those preparing for their naturalization. Includes discussion of new skills and techniques in learning to speak, read, and write English; aids in organizing and conducting classes; and in helping teachers to understand backgrounds of foreign born.

**115A. History and Philosophy of Education** (2) I, II, Summer

Historical backgrounds and underlying philosophies upon which the public school system has been established. Emphasis on the meaning of education, educational aims and values, and democracy and education. Prerequisite: Senior standing or the equivalent; minimum of 12 units of education.

**115B. Secondary Education** (3) I, II or Summer

An introduction to understanding the development of secondary education and its present status as a social institution. Topics developed include: Curriculum; teaching methods; audio-visual instructional materials; organization and administration; guidance; and objectives. Field work required.

**116. Directed Teaching** (2-12) I, II

Systematic observation, participation and teaching under supervision in the campus elementary school, the affiliated elementary, junior high and senior high schools. During each semester of student teaching a weekly conference period is required as indicated in the time schedule. Prerequisite: Admission to teacher education; education program approved by Coordinator of Elementary or Secondary Education. Any grade below C is unacceptable for a credential.

**117A. Elementary Music Education** (2) I, II

Objectives of music teaching; study of the child voice; and organization of song material by grades. Procedure in presenting rote songs, ear training, elementary notation, music reading, and part singing. Prerequisite: Music 7A, or the equivalent. Not open to students who have had Music 7B.

**117B. Methods in Instrumental Music** (2) I or II

The theory of organizing and conducting school bands and orchestras, and the selection of materials. Provides practical experience in conducting a children's orchestra and teaching sectional groups. Systematic planning for pupils of various ages and abilities.

**119. Art in the Elementary School** (2) I, II

Discussion of the elements and principles of art and their place in the art expression and appreciation of the elementary school child. Laboratory experience in elementary school problems. Not open to students taking the elementary credential. Prerequisite: Art 6A.

**122. Social Studies in Elementary Education** (2) I, II, Summer

The purpose, scope, organization and development of instructional procedures in the social studies in the elementary school. Development of curriculum units and the analysis of teaching materials.

**123. Science in Elementary Education** (3) Irregular

The construction and use of science equipment, the effective use of audio-visual aids, the use of environmental resources, and the use of texts and supplementary materials. Relations to social science in the elementary curriculum are also developed.

**125. Curriculum in Elementary Education** (3) Irregular

Emphasis upon the selection and development of content, teaching methods, and materials as they relate to social needs; evaluation procedures; psychological principles, and the nature of the learner.

**126. Literature in Elementary Education** (3) Irregular

Criteria for the selection of children's literature, children's reading interests, the development of units of instruction in the social studies, the use of the verse choir, dramatic readings and similar procedures, and the use of the library.

**129. Arithmetic in Elementary Education** (2) I, II, Summer

For teachers of arithmetic in the elementary and junior high school. Emphasis is placed upon the understanding of the systems of notation and language techniques. Opportunity will be given for the development of instructional materials and procedures.

**130. Educational Psychology** (2) I, II, Summer

To develop understanding of the applications of psychological research for effective classroom teaching. Observation and field work required. Prerequisite: Psychology 1. Not open to students with credit for Psychology 130.

**134. Behavior Problems in Early Childhood** (1) Summer

Lectures and related readings on the typical behavior problems of two to twelve year olds, for teachers and parents.

**136. Reading in Elementary Education** (3) I, II, Summer

Scientifically developed procedures for determining reading readiness, beginning reading, independence in word recognition, vocabularly development, word analysis, standards of attainment, types of reading programs, and the selection, preparation and use of reading materials.

**138. Workshop in Family Life Education** (3) Summer

Series of lectures, discussions, and laboratory sessions devoted to furthering understanding of the problems of family life education. The student will have an opportunity to develop units suitable for a program of family life education. Community agencies will participate in the workshop.

**143. Adult Education** (3) (Irregular)

A study of the aims and scope of adult education and its function as a part of the public school system. Individual and group work will be emphasized. Admission by permission of the instructor.

**144. Diagnosis and Remedial Treatment of Difficulties in Reading** (3) Summer

The causes of reading difficulties and the procedures for diagnosis and remedial treatment. Practical work with children with reading problems. Primarily for principals, supervisors and teachers-in-service. Prerequisite: Education 102B or Education 102A, and Education 136, or one year of successful teaching experience.

**145A. Organization and Administration of Music Education** (2) II

Administration of an instrumental music program: purchase, care, depreciation of instruments and equipment; developing interest; ethics; schedule-making; operation and maintenance of music library; personnel and equipment records; the achievement point system; the marching band show; rehearsal procedure.

**146. Education Practicum** (Kindergarten-Primary) (4) I, II, Summer

A continuation of Education 148 and will accompany Education 116 in the kindergarten. A study of the theory of early childhood education providing experience with children of nursery school and kindergarten ages. Prerequisite: Education 147, 148.

**146B. Interpretation of Early Childhood Behavior** (3) Summer

For kindergarten-primary teachers treating the analysis and interpretation of early childhood behavior. Emphasis on understanding and interpreting the causative factors in typical behavior of children to parents, social workers, teachers, and others concerned with the guidance of kindergarten-primary children.

**147. Education Practicum** (10) I, II

Required of all students who expect to receive a credential which will qualify them to teach in the kindergarten or in the elementary school. Students should take the course during the next semester after admission to teacher education, which is usually the first semester of the junior year. Registration is strictly limited to those who have been approved by the Committee on Admission to Teacher Education.

The content of the Education Practicums include both classroom participation (directed teaching) and the study of the principles of education. The course includes Reading (2); Social Sciences in the Elementary School (2); Language Arts (2); Arithmetic (2); Observation (1) Audio-Visual-Radio Instruction (1) is integrated with the course.

**148. Education Practicum** (10) I, II

This course is a continuation of Education 147 and is required of all students who are candidates for the general elementary credential or the kindergarten-primary credential. An extended analysis is made of the psychology of education in various fields and application is made through directed teaching in grades 4 to 6. The course includes Elementary Science Education (1); Elementary Art Education (2); Elementary Music Education (2); Educational Psychology (learning process and theory of audio-visual education) (2); Curriculum in Elementary Education (2); Education 116, Directed Teaching (2). Prerequisite: Education 147.

**149A. Laboratory in Elementary Education** (3) Summer

A general course in observation and theory, including a study of arithmetic, reading, language, music, science, social studies, art, spelling. Students in this course will observe in the summer demonstration school and discuss with the staff the teaching procedures.

**149C. Laboratory in Rural Education** (6) Irregular in Summers

Observation in a one-room multigraded summer demonstration school. Students will observe demonstrations, discuss procedures with the staff, and prepare material for their own schools.

**149D. Workshop in Elementary Education** (3 or 6) Summer

To meet the needs of individual or groups of teachers who desire to study selected problems in elementary education. The observation of classroom teaching will be provided for members in attendance. Interested persons should correspond with the Coordinator of Elementary Education, San Diego State College.

**154. Reading in Secondary Education** (3) II (Offered in 1952-53 and alternate years, alternating with Education 144)

The nature of the reading program, development of techniques and skills, vocabulary development, reading in the content fields, the differentiated attack, measurement, diagnosis and remediation.

**155. Guidance in Elementary Education** (3) Summer

A study of the basic principles of guidance and their function in the educational process as applied in the elementary school.

**156. Guidance Conference** (1) Summer

A series of lecture and discussion sessions centering on current problems in counseling and guidance. Designed to serve the needs of any person desiring to keep informed of developments in this area. Admission upon permission of the director of this conference.

**158. Supervision of Child Welfare and Attendance** (3) Summer

Content includes laws relating to children, guidance principles, social case work, agency relationships, conference techniques, home visitation methods, employment supervision, attendance work, child accounting, familiarity with testing techniques.

**161. Legal Aspects of Education** (3) Irregular

A study of the school law of California, important court decisions, rulings of the California State Superintendent of Public Instruction and the Attorney General, historical and current trends, and comparative data from throughout the United States.

**166. Honors Course** (Credit to be arranged) I, II Refer to the Honors Program.

**171. Audio-Visual Conference** (1) Summer

A series of lectures, discussions and demonstrations, centering on problems in the use of audio-visual instructional materials. Designed for teachers, administrators, audio-visual representatives, and others interested in current developments in this area. Course may be taken twice for credit.

**174. Audio-Visual-Radio Education** (3) I, II, Summer

A study of audio-visual-radio aids as they affect learning. Analysis and development of materials of instruction and their presentation; operation of equipment.

**174BE. Audio-Visual Business Education** (3) Summer

A review of the skills and knowledges necessary to use audio-visual aids, followed by intensive study and research in the literature available and by practice with the materials and techniques that apply to business education.

**175. Creating Audio-Visual Materials for Classroom Use** (3) I, II or Summer

Practice in the creation and evaluation of instructional materials, such as 35 mm. film strips, 16 mm. films, scripts, recordings and other audio-visual materials. Prerequisite: Education 174, or equivalent.

**176. Problems of Speech Correction and Articulation** (3) II

Analysis and discussion of the major articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Not open to students with credit for Speech Arts 176.

**177. The Teaching of Lip Reading** (2) Summer

History, theory and methods of lip reading. Aids for the classroom teacher; program and materials of instruction for the specialized teacher. Opportunities for practice teaching are offered. Not open to students with credit for Speech Arts 177.

**178. Problems of the Hard of Hearing** (2) Summer

The adjustment of the hard-of-hearing group with emphasis on the public school child. State and county hearing programs; technique of audiometry; use of hearing aids; educational, classroom, and social problems.

**179A-179B. Nervous Speech Disorders** (3-3) Year, I

Classification and study of speech defects and disorders. Training in corrective technique for public schools; observation. Required for the Special Secondary Credential in Correction of Speech Defects. Not open to students with credit for Speech Arts 179A-179B.

**181. Exceptional Children** (3) I or II

Characteristics and adjustment problems of mental, physical, and emotional deviates; emphasis upon the mentally handicapped.

**182. Curriculum and Methods for Mentally Retarded Children** (3) II or Summer

Selection, organization and presentation of curricular materials for mentally retarded children.

**183. Practicum for Teaching Mentally Retarded Children** (3) Summer

Analysis and interpretation of educational procedures utilized with the retarded learner. A demonstration class will be available for observation. Education 182 must be taken prior to, or concurrently with, Education 183.

**184A. The Secondary School** (4) I, II

To orient the student toward his function as a teacher in the public secondary schools, including basic principles, history and philosophy of education, elementary and audio-visual instruction, and to understand the school as a social institution. Field work required.

**184B. Development and Learning** (4) I, II

To acquaint the student in secondary education with the nature of development and the learning process, with consideration of mental hygiene, guidance and the place of audio-visual aids. Field work required.

**184C. The Teaching Process** (4) I, II

To develop teacher competency at the secondary level in relationships and planing with the pupil, the community, and the profession, including classroom management, audio-visual education, lesson planning, evaluation, and co-curricular activities. Field work required.

**187A-187B-187C. Child Study Laboratory** (2-2-2) I, II

Development of background and procedures for child study and their application to field situations. Field work required. For teachers in service. 187A is prerequisite for 187B, and 187B is prerequisite for 187C.

**188. Techniques of Pupil Appraisal** (3) I, II or Summer

A study of, and practice in, techniques of collecting, assembling, and interpreting data about individual pupils for guidance purposes. Field work required. Prerequisite: Education 102D or 102A, or consent of instructor. Not open to students who have credit for Psychology 105A or 105B.

**189. Workshop in Secondary Education** (3 or 6) Summer

Designed to meet the needs of individual or groups of teachers who wish to develop or continue the study of some problem with the consultation of the College Staff and the San Diego County Curriculum Staff.

**191. Driver Education** (2) Summer

A workshop type course designed to prepare teachers of the course in high school. Enrollment by permission of the instructor.

**199. Special Study** (1-6) I, II, and Summer

Individual study. Six units maximum credit. Prerequisites: open only to senior and graduate students in education who have shown ability to work independently; permission of instructor.

## Graduate Courses

For general requirements for admission to graduate courses, see statement on Admission to Graduate Status in section on Admission and Registration. In addition to these general requirements, 12 units of professional education are prerequisite for enrollment in all graduate courses.

**207. Educational Sociology** (3) Summer

A study of the social, economic, political and moral setting in which present day American education functions. Prerequisite: Education 115A, or equivalent, teaching experience.

**220. Advanced Educational Psychology** (3) I, II, Summer

Advanced study of the research and its application to learning and human growth. Prerequisite: Educational Psych. 130, or equivalent, teaching experience.

**230. Guidance Problems in Secondary Education** (3) I, II, Summer

Individual and group study of the theory and practice of guidance with emphasis upon practical problems of the members of the class.

**232. Problems in Vocational Guidance** (3) I, II or Summer

To prepare teachers for vocational guidance in the secondary schools. Includes occupational information, vocational aptitude measurement, and educational guidance. Prerequisite: Education 230, or equivalent.

**233A. Guidance Counseling Techniques** (3) I, II

Designed for school counselors. To stress the understandings and procedures necessary for effective interviewing. Prerequisite: Education 230, or equivalent. Not open to students with credit for Psychology 233A.

**233B. Guidance Counseling Techniques** (3)

Continuation of the work of Education 233A. Prerequisite: Education 230 and 233A, or equivalents.

**237. Research in Guidance Problems** (1-3) I, II

Individual study by graduate students who have demonstrated exceptional ability and a need for such work. Admission by permission of the Coordinator of Secondary Education and instructor.

**238. Field Work in School Guidance** (3) I or II

Application of the principles and procedures in testing, counseling, and related personnel work in the public schools. Weekly seminar sessions with college and cooperating staff. Prerequisite: Permission of instructor and 12 units in guidance and related areas.

**239. Workshop in Pupil Personnel Services** (3) Summer

Application of principles and procedures to specific situations for improvement of pupil personnel services. Individual problems emphasized. Prerequisite: Teaching experience and permission of director of workshop.

**241. Problems in the Teaching of Arithmetic** (3) Summer

A study of research and practice in the methods of teaching and in the curriculum of elementary and junior high school arithmetic. Prerequisite: Education 129 or equivalent.

**242. Problems in the Teaching of Reading** (3) Summer

Advanced study of trends in reading instructions. Topics include developmental sequences in reading skills and abilities, reading in the content fields, individual differences, and interests. Students will develop individual projects or problems. Prerequisites: Education 136 and 144 or equivalents.

**243. Seminar in Social Studies in Elementary Education** (3) I

Advanced study of problems in teaching social studies in the elementary school with emphasis on the study of the scientific research in the field. Prerequisite: Permission of instructor.

**244. Seminar in Language Arts in Elementary Education** (3) Summer

Advanced study of problems in teaching language arts in the elementary school, including spelling, literature and written and oral communication. Emphasis will be on the study of scientific research in the field. Prerequisite: Permission of instructor.

**245. Seminar in Elementary Education** (3) II

A study of the methodology of research with particular reference to the basic research in the psychology and teaching of the elementary school subjects. Prerequisite: 12 units in elementary education and permission of the instructor.

**250. Curricular Problems in Secondary Education** (3) I, II

Present status and development of the secondary school curriculum. Emphasis upon curriculum construction with individual study and development of solutions of problems of the students. Prerequisite: 12 units in secondary education and permission of the instructor.

**252. General Education in the Secondary School** (3) Summer

A course designed for teachers in service. A study of the function and implementation of general education in the secondary school. Prerequisite: 12 units in secondary education and permission of the instructor.

**254. Advanced Problems in Secondary School Instruction** (3) I, Summer

An analysis of the scientific research and philosophical principles in secondary school instruction. Prerequisite: Teaching experience and permission of instructor.

**256. Recent Trends in Secondary Curriculum** (3) I, II or Summer

Current practices and trends in secondary schools. Extensive individual work on related problems of interest to members of the class. Prerequisite: 12 units in secondary education and permission of the instructor.

**257. Workshop in Intercultural Education** (4)

A cooperative workshop sponsored by the college and the San Diego City Schools to study trends in intercultural education in American schools, including units, curricular and instructional materials and techniques. Enrollment only by application to the Chairman of the Division of Education.

**258. Research in Curricular Problems** (1-3) I, II

Individual study by graduate students who have demonstrated exceptional ability and a need for such work. Admission by permission of the Coordinator of Secondary Education and instructor.

**260. Federal, State, County and City School Organization and Administration** (3) I, Summer

A study of the federal, state, county and city school organization, administration and supervision, including school law.

**262. The Organization and Administration of Elementary Schools** (3) I or Summer

A study will be made of the problems of personnel, local finance, curriculum, plant, community relations, and legal aspects of elementary schools. Required as a prerequisite to Education 266. Prerequisite: Teaching experience, valid General Elementary Credential, and consent of the instructor.

**263. The Organization and Administration of the Secondary School** (3) I or II, Summer

Topics will cover all aspects of the duties of a secondary school administrator, including personnel, finance, curriculum, equipment and supplies, public relations, transportation, and law. Prerequisite: Possession of a valid General Secondary Credential and permission of the instructor.

**264. Elementary School Supervision** (3) I or Summer

Principles and practices of supervision and methods of evaluating instruction and the curriculum in elementary education. Prerequisite: General Elementary Credential, teaching experience, Education 260, 262, or equivalents, and permission of the instructor.

**265. Secondary School Supervision** (3) I or II, Summer

For those who will be responsible for the supervision and evaluation of the curriculum and teaching methods in the secondary school. Prerequisite: Possession of a valid General Secondary Credential, teaching experience, and permission of the instructor.

**266. Field Work in Elementary School Administration and Supervision** (2) II

Study of the administration and supervision of an elementary school, for the Elementary School Administration and Supervision Credentials. Field project required of all students under the direction of a college staff. Prerequisite: Education 262 or 264, or equivalent.

**267. Field Work in Secondary School Administration and Supervision** (2) II

Study of practices as they are found in secondary schools relative to administration and supervision; to insure direct contact with existing programs and procedures through faculty guided projects. Prerequisite: Education 263 or 265, or equivalent.

**268. Seminar in School Administration** (3) Summer

An intensive study of selected problems in finance, business administration, and other topics in the field of school administration. Provision will be made for individual work on special topics of interest to students.

**270. School Finance, Business Administration, and Law** (3) II, Summer

A study of public school finance at state and local levels; an analysis of the business administration of schools; a study of school law as it applies to school finance, administration and other aspects of public education.

**271. Supervision of Student Teaching** (2) I, II

Study of selection, orientation, induction, counseling and evaluation of credential candidates and student teachers; and helping student teachers plan lessons, conduct classroom learning, analyze pupils' difficulties and achievement. Open to experienced teachers interested in the teacher education program.

**274A. Utilizing Audio-Visual Materials in the Classroom** (3) I

A critical analysis of research evaluating the use of visual, auditory, and other sensory materials in education. Prerequisite: Education 174, or equivalent.

**275. Administering the Use of Audio-Visual Materials** (3) II, Summer

Organizing, supervising, and coordinating audio-visual centers as an integral part of educational systems. Prerequisite: Education 174, or by permission of the instructor.

**278. Educational Leadership** (3) I, II, Summer

An analysis of the factors and practice in procedures of group and individual leadership in four areas: (a) the community; (b) the teaching staff; (c) the student personnel; (d) the professional field of educational administration and supervision. Prerequisite: Permission of the instructor.

**290. Procedures of Investigation and Report** (2-3) I, II, Summer

Emphasizes procedures in selecting and writing a project or thesis. Methods of investigation and reporting data. Extensive survey of an area of professional literature to analyze techniques and style. Separate sections for elementary and secondary levels.

**298. Special Study** (1-6) I, II, Summer

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3) I, II, Summer

Guidance in the preparation of a project or thesis for the master's degree.

**316. Directed Teaching** (3-3) I, II

Systematic observation, participation, and teaching under supervision in an affiliated school. Thirty clock hours of student teaching will usually earn one unit of credit, but the credit finally allowed will depend upon the nature and quality of the teaching done. Any work below a C grade is unacceptable for a credential.

No student can enroll in this course until he has completed Education 184A and 184B, enrolled in Education 100B, and has been admitted to candidacy for the teaching credential.

During the semesters in which the student takes his assignments in student teaching, he must meet with the college supervisor one hour each week for conference and discussion of problems encountered in his teaching.

Students who have had student teaching in preparation for the junior high school or special secondary credential should confer with their departmental and educational advisers concerning partial fulfillment of this requirement as the result of having completed the student teaching required for the credentials mentioned above.

# ENGINEERING

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in *engineering* for the B.S. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements for all engineering options: Chemistry 1A-1B; Physics 4A-4B-4C; Mathematics 3A-3B, 4A-4B; Engineering 21 and 23, or their equivalents. Nine units in chemistry, physics, and mathematics may be applied toward general education requirements. Refer to Engineering Curricula below for additional requirements for various options. Upper division requirement: a minimum of 36 upper division units. Specific requirements for the various engineering options are listed in the Engineering Curricula below. A minor is not required of engineering majors.

A *teaching major* is not offered in engineering.

### Minor

A *minor in arts and sciences* is offered in engineering. The minor consists of 15 to 22 units in engineering, nine units of which must be in courses carrying upper division credit. The courses should follow a logical sequence approved by the departmental representative.

A *teaching minor* is not offered in engineering.

### ENGINEERING CURRICULA

The curricula given below specify the requirements for the indicated options and include recommended electives to fulfill the requirements for general education. General education courses are prefixed with an asterisk (*).

### Lower Division Requirements for all Engineering Students

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| * P.E. activities | ½ | ½ |
| Math. 3A-3B | 3 | 3 |
| Physics 4A | – | 4 |
| Chem. 1A-1B | 5 | 5 |
| * English 1 | 3 | – |
| * Speech Arts 3 | 2 | – |
| * Biology 1 | – | 3 |
| * Psychology 1 | 3 | – |
| | 16½ | 15½ |

| | *Units* | |
|---|---|---|
| **Sophomore Year** | *1st Sem.* | *2d Sem.* |
| * P.E. activities | ½ | ½ |
| Math. 4A-4B | 3 | 3 |
| Physics 4B-4C | 4 | 4 |
| * Econ. 1A-1B | 3 | 3 |
| Engr. 21 and 23 | 3 | 2 |
| Restricted electives | 3 | 3–4 |
| Aero., Electrical, and Mech.: Engr. 1A, 22 | | |
| Chem.: Chem. 101A, 5A | | |
| Civil: Engr. 1A-1B | | |
| Econ.: Bus. 14A-14B | | |
| Electron.: * Lit. or Phil. and elective | | |
| | 16½ | 15½-16½ |

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* General education courses. (Nine additional units in chemistry, physics, and mathematics may be applied toward general education requirements.)

## Upper Division Requirements for all Engineering Students

| Junior Year | Units | |
|---|---|---|
| | 1st Sem. | 2d Sem. |
| Engr. 100A-100B | 3 | 3 |
| Engr. 102A-102B | 3 | 3 |
| Engr. 127, 140 | 3 | 3 |
| * Health Educ. 21 | 2 | – |
| * Ind. Arts 5 | 3 | – |
| ‡ * Soc. Sci. elective | – | 3 |
| | 14 | 9–12 |

| Senior Year | Units | |
|---|---|---|
| | 1st Sem. | 2d Sem. |
| † * Literature or Philosophy | – | 3 |
| * Econ. 170 | 3 | – |
| Engr. 105 | – | 3 |
| Engr. 198 | – | 2 |
| Engr. 180 | – | 3 |
| | 3 | 8–11 |

* General education courses. (Nine additional units in chemistry, physics, and mathematics may be applied toward general education requirements.)

‡ Chemical engineers take social science elective in first semester of senior year. All students should remove U. S. history-Constitution and California State and Local Government requirements by examination or by taking appropriate social science courses.

† * Electronics engineers take literature or philosophy first semester of sophomore year.

Additional requirements for various fields of specialization:

### Aeronautical Engineering

| Junior Year | Units | |
|---|---|---|
| | 1st Sem. | 2d Sem. |
| Engr. 101A | 2 | – |
| Engr. 141 | – | 2 |
| Engr. 101B | – | 2 |
| | 16 | 16 |

| Senior Year | Units | |
|---|---|---|
| | 1st Sem. | 2d Sem. |
| Math. 118A | 3 | – |
| Engr. 122 | 4 | – |
| Engr. 129, 106 | 2 | 2 |
| Engr. 142, 156 | 3 | 3 |
| | 15 | 16 |

### Chemical Engineering

| Junior Year | Units | |
|---|---|---|
| | 1st Sem. | 2d Sem. |
| Engr. 141 | – | 2 |
| Chem. 110A-110B | 3 | 3 |
| Chem. 101B | – | 4 |
| | 17 | 18 |

| Senior Year | Units | |
|---|---|---|
| | 1st Sem. | 2d Sem. |
| Math. 118A | 3 | – |
| Engr. 129, 106 | 2 | 2 |
| Chem. 144A-144B | 3 | 3 |
| * Soc. Sci. electives | 3 | – |
| | 14 | 16 |

### Civil Engineering

| Junior Year | Units | |
|---|---|---|
| | 1st Sem. | 2d Sem. |
| Engr. 130 | 3 | – |
| Engr. 141 | – | 2 |
| Elective | – | 2 |
| | 17 | 16 |

| Senior Year | Units | |
|---|---|---|
| | 1st Sem. | 2d Sem. |
| Math. 118A | 3 | – |
| Engr. 142, 106 | 3 | 2 |
| Astronomy 113 | 3 | – |
| Engr. 135 | – | 3 |
| Elective | 4 | – |
| | 16 | 16 |

### Electrical Engineering

| Junior Year | Units | |
|---|---|---|
| | 1st Sem. | 2d Sem. |
| Engr. 101A-101B | 2 | 2 |
| Engr. 141 | – | 2 |
| | 16 | 16 |

| Senior Year | Units | |
|---|---|---|
| | 1st Sem. | 2d Sem. |
| Math. 118A | 3 | – |
| Engr. 129 | 2 | – |
| Physics 102 | 3 | – |
| Physics 107 | 2 | – |
| Elective | 3 | 4 |
| | 16 | 15 |

### Electronics Engineering

| | Units | |
|---|---|---|
| Junior Year | 1st Sem. | 2d Sem. |
| Engr. 104 | – | 3 |
| Physics 102 | 3 | – |
| | 17 | 15 |

| | Units | |
|---|---|---|
| Senior Year | 1st Sem. | 2d Sem. |
| Math. 118A | 3 | – |
| Engr. 101A-101B | 2 | 2 |
| Engr. 124 | – | 2 |
| Engr. 150 | – | 3 |
| Physics 107 | 2 | – |
| Physics 122 | 2 | – |
| Physics 152 | 2 | – |
| Elective | 3 | – |
| | 17 | 15 |

### Engineering Economics

| | Units | |
|---|---|---|
| Junior Year | 1st Sem. | 2d Sem. |
| Elective (to include at least one of the following laboratory courses: Engr. 101A, 101B, 106, 129, 141 | 2 | 4 |
| | 16 | 16 |

| | Units | |
|---|---|---|
| Senior Year | 1st Sem. | 2d Sem. |
| Econ. 150, 140 | 3 | 3 |
| Econ. 133 | 3 | – |
| Business 18A | 3 | – |
| Business 121 | 3 | – |
| Elective | – | 3 |
| | 15 | 17 |

### Mechanical Engineering

| | Units | |
|---|---|---|
| Junior Year | 1st Sem. | 2d Sem. |
| Engr. 101A-101B | 2 | 2 |
| Engr. 141 | – | 2 |
| | 16 | 16 |

| | Units | |
|---|---|---|
| Senior Year | 1st Sem. | 2d Sem. |
| Math. 118A | 3 | – |
| Engr. 122, 106 | 4 | 2 |
| Engr. 128, 145 | 3 | 3 |
| Engr. 129 | 2 | – |
| | 15 | 16 |

### Lower Division Courses

**1A-1B. Plane Surveying (3-3) Year, I**

Two lectures and one three-hour field period per week. Semester I: Use, care and adjustment of surveying equipment. Introduction to standard procedures and techniques. Prerequisites: Engineering 2, or equivalent, Math. D, and sophomore standing. Semester II: Computations and map making; land, topographic, and city surveying. Prerequisite: Engr. 1A.

**2. Mechanical Drawing (3) I, II**

Freehand lettering, use and care of drafting equipment, simple orthographic projection, introduction to problems of dimensioning. Open to students lacking credit for a year course in senior high school mechanical drawing. Not open to students with credit for Industrial Arts 2.

**21. Descriptive Geometry (3) I**

Fundamental principles of descriptive geometry and their application to engineering problems. Solutions of point, line and plane problems; curved lines and surfaces; intersections of surfaces. One lecture and two three-hour laboratory periods per week. Prerequisite: Engr. 2, or equivalent, and sophomore standing.

**22. Machine Drawing (3) II**

Standard drawing methods and procedures, complete sets of working drawings of simple machine parts, gears and cams; includes tolerance dimensioning, sectioning, threads and fasteners. One lecture and two three-hour laboratory periods per week. Prerequisites: Engr. 21, Math. 3A-3B.

**23. Materials of Engineering (2) II**
A concise presentation of the physical properties of the common materials used in structures and machines, with brief descriptions of their manufacture and fabrication. Two lectures per week. Prerequisite: Sophomore standing.

### Upper Division Courses

**100A-100B. Elements of Electrical Engineering (3-3) Year, I**
Theory and characteristics of electrical equipment with emphasis on industrial applications. Lectures and problems. Semester I: Direct current circuit analysis. D. C. motors and generators. Introduction to alternating current circuits. Prerequisites: Math. 4A, Physics 4B, or permission of the instructor. Semester II: Alternating current circuit analysis. Transformers, alternators, induction and synchronous motors, conversion apparatus, and transmission lines. Prerequisite: Engr. 100A.

**101A. Electrical Engineering Laboratory (2) I**
Laboratory determination of the characteristics of direct current machinery and circuits, single phase alternating current circuits. One three-hour lab. and report per week. Prerequisite: Engr. 100A, or taken concurrently.

**101B. Electrical Engineering Laboratory (2) II**
Laboratory determination of the characteristics of single phase and polyphase circuits, machines, and related equipment. One three-hour laboratory period and report per week. Prerequisite: Engr. 100B, or taken concurrently.

**102A-102B. Analytical Mechanics (3-3) Year, I**
Lectures and problems. Emphasis on engineering applications. Semester I: Principles of statics which deals with the conditions of equilibrium of bodies acted upon by forces. Prerequisites: Physics 4A-4B, Math. 4A. Semester II: Principles of dynamics which deals with the fundamentals of rectilinear and curvilinear motion of particles and rigid bodies, and the rotation of rigid bodies. Prerequisite: Engr. 102A.

**104. Communications (3) II**
Power amplifiers, oscillators, modulators and detectors. Radio transmitters and receivers for amplitude modulation and frequency modulation. Television systems. Antennas and radio wave propagation. Prerequisite: Physics 102 or permission of the instructor.

**105. Fluid Mechanics (3) II**
The statics and dynamics of incompressible and compressible fluids. Viscosity, fluid friction. Dimensional analysis. Fluid measuring instruments. Flow of compressible and incompressible fluids in pipes. Flow of liquids in open channels. Pumps. Prerequisites: Mathematics 4A, Physics 4A, Engineering 102A, and Engineering 127.

**106. Fluid Mechanics Laboratory (2) II**
Characteristics of fluid measuring instruments. Fluid flow through pumps, etc. One three-hour laboratory and report per week. Prerequisite: Engineering 105 or concurrent registration.

**122. Machine Design (4) I**
Individual design of a useful machine encompassing fundamental considerations of simple machine parts. Practical design methods utilizing professional literature are stressed. Three lectures and one three-hour laboratory period per week. Prerequisites: Engr. 23, 102A, 140.

**124. Radio Measurements (2) II**
A laboratory course on measurements of the parameters of resonant circuits at radio frequencies. Study of the properties of oscillators, modulators, detectors and wave guides. Prerequisite: Previous or concurrent enrollment in Engineering 104. Students with credit in Physics 124 may not receive credit for this course.

**127. Engineering Thermodynamics (3) I**
An introduction to the basic principles of thermodynamics; laws of perfect gases, vapors and mixtures; cycles. Applications to engineering problems such as the analysis of heat, power, and refrigeration systems, and steady-flow processes. Lecture and problems. Prerequisites: Mathmetics 4A and Physics 4B.

**128. Applied Engineering Thermodynamics** (3) I

The study of various types of heat power equipment; steam generation, turbines, reciprocating engines and auxiliaries; fuels and lubricating oils; gas and oil engines. gas turbines, refrigeration and compressors. The practical application of basic theory to proper, efficient operating practices is stressed. Lectures and problems. Prerequisite: Engineering 127.

**129. Heat Power Laboratory** (2) I

Testing of steam generators and heat balance of same; steam turbine; reciprocating engine; internal combustion engines; flue gases, lubricating oils and boiler feed water. Emphasis upon standardized testing procedures, approved by SAE and ASME, and standard operating procedures. One three-hour laboratory period and report per week. Prerequisite: Engineering 127.

**130. Route and Construction Surveying** (3) I

Application of surveying to engineering problems. Methods of route surveys for highways, railroads, utilities. Construction surveys for buildings and other structures. Earthwork computations. Two lectures and one three-hour field period per week. Prerequisite: Engr. 1B.

**135. Concrete Structures** (3) II

Concrete structures including both plain and reinforced concrete. Practical application of the mathematical theories of mechanics and strength of materials, including analysis and design of such structures as dams, walls, floor slabs, columns, beams, and frames. Prerequisite: Engineering 140 or concurrent registration.

**140. Strength of Materials** (3) II

Elastic properties and strength of engineering materials. Analysis of types of failures. Stress analysis and deformation of simple structural and machine members. Photoelasticity. Lecture and problems. Prerequisite: Engr. 102A.

**141. Materials of Engineering Laboratory** (2) II

Theory and operation of testing machines and auxiliary apparatus. Conduct of tests to determine significant characteristics of commonly used engineering materials. Included are heat treatment of metals, metallographic tests, and photoelasticity. One three-hour laboratory and report per week. Prerequisite: Engr. 140, or taken concurrently.

**142. Stress Analysis** (3) I

Determination of stresses in trusses, beams, and frames. Combined stresses; space structures; general theorems relating to elastic systems; statically indeterminate structures; deflections; analytical and graphical methods of solution. Lectures and problems. Prerequisites: Eng. 102A-102B, 140.

**145. Internal Combustion Engines** (3) II

Application of theory of thermodynamics to internal combustion engines. Essential features of design, operating characteristics, and application of gasoline, diesel, and gas engines, and the gas turbine. Lectures and problems. Prerequisites: Physics 4C, Math. 4A. Recommended: Engr. 128.

**150. Industrial Electronics** (3) II

Photoelectricity and its applications; rectification and inversion; theory and applications of thyratrons and ignitrons including welding; radio-frequency heating; electrostatic precipitation; motor control and introduction to servomechanisms. Prerequisite: Physics 102.

**156. Aerodynamics** (3) II

Mechanics and thermodynamics of air; wing characteristics; drag; wind tunnel testing technique; propellers and power plants; aircraft performance; stability and control. Introduction to compressible aerodynamics. Lectures and problems. Prerequisites: Engr. 102A-102B.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**180. Principles of Engineering Economy** (3) II
Analysis of the costs of development and promotion, construction, operation, depreciation and depletion. Capital recovery, income, return and yield. Valuations and appraisals, cost analysis and financial analysis. Application to engineering problems. Prerequisite: Senior standing.

**198. Senior Report** (2) I, II
Investigation of specific problems of advanced nature. Preparation of report. Prerequisite: Advanced senior standing.

NOTE.—In laboratory courses special emphasis is placed upon the preparation of neat, concise, complete and intelligent reports.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

# ENGLISH

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *English*. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: At least 12 units of work, in addition to English 1 or 41; at least six must be in a year course. Upper division requirements: A minimum of 24 upper division units in English and comparative literature, selected with the approval of a departmental representative; two years of lower division work in a foreign language or the equivalent reading knowledge of a language is strongly recommended. A minor is not required of students majoring in English.

Prospective majors of sophomore standing may, with the consent of the course instructor and subject to general college regulations (see section on Lower Division and Upper Division Courses), substitute six units of upper division electives for six units of lower division work, such upper division units to be selected from the following: English 101A, 116A, 116B, 118A, 118B, 119A, 119B, 126A, 126B, 143A, 143B.

Students of junior or senior standing may substitute for any deficiencies in lower division requirements in English (except English 1 or 41) an equivalent number of units of upper division courses selected from the following: English 101A, 116A, 116B, 118A, 118B, 119A, 119B, 120A, 120B, 126A, 126B, 143A, 143B, 151, 159.

A *teaching major in English* is offered for the general secondary or junior high school credential. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *English*. The minor consists of 15 to 22 units in English, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is offered in English for the general secondary, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information refer to the outlines of requirements for these credentials.

### Comparative Literature

For courses in world literature, see Comparative Literature; these courses give credit toward the English major or minor or toward the minor in Comparative Literature.

### Credit in Course Sequences

All elective year courses in the department may be begun in either semester, and either semester may be taken singly for credit.

### Lower Division Courses

**A. English Fundamentals** (3) I, II
The elements of composition, including drill in grammar and usage; exercises in vocabulary building and in fundamental reading skills; theme writing. Credit in this course is equivalent to passing the English A examination and may be counted toward graduation as an elective but not to satisfy lower division English requirements in any curriculum.

**R. Reading Laboratory** (0) I, II

A semi-tutorial service offered by the English Department to those wishing to improve reading ability, or secure individual help with study problems. Open to all students at any level of college work. Consult department chairman.

**W. Writing Laboratory** (0) I, II

A semi-tutorial service offered by the English Department to those wishing assistance in writing projects, either remedial or advanced. Open to students at any level of college work. Consult department chairman.

***1. Freshman Composition** (3) I, II

Study and practice in the expression of ideas and factual materials; principles of organization and of effective style, with emphasis on exposition. Prerequisite: Satisfactory English A examination or credit in English A.

***2A. Freshman Literature: Imaginative** (3) I, II

Training in reading with insight and vividness.

***2B. Freshman Literature: Modern Thinking** (3) I, II

Designed to develop college reading skills through practice in the analysis of materials at various levels of difficulty.

**10. Recreational Reading** (1) I, II

Development of personal tastes for leisure-time reading through lectures and written reports. May be taken a second time with new materials.

**20. Latin and Greek Word Derivation** (3) I

A general and elementary course in philology. Study of Latin and Greek roots of most frequent occurrence in English, and of the English words derived from them. No prerequisite. Not open to students with credit for General Language 20.

**50A-50B. Masterpieces of American Literature** (3-3) Year, I

Semester I: Major American writers from the beginning to 1860. Semester II: American literature from 1860 to the present.

***52A-52B. Masterpieces of World Literature** (3-3) Year, I

A chronological survey from Homer to modern times. The first semester stresses the classical epic and tragedy. The second semester, beginning with the Renaissance, stresses prose fiction, the drama, and the essay. Not open to students with credit for Comparative Literature 52A-52B.

**56A-56B. Survey of English Literature** (3-3) Year, I

The study of some important works of English literature from the Anglo-Saxon period through the Victorian age, with emphasis upon the literary history of each period.

**60A-60B. Literature and Personality** (3-3) Year, I

The close study of a limited number of the great creators of literature. The goal of the course is to derive, from markedly different specific works, orderly and generalized methods for the interpretation of great literature.

***61. Sophomore Composition** (3) I

An elective course designed to give further training to the student who wishes practice in writing beyond the freshman level. Prerequisite: English 1 or equivalent.

**62. The Short Story** (3) II

A practical course in writing, including a study of short story techniques and purposes, and the writing of complete short stories. Prerequisite: English 1 or equivalent.

**63. Foundations of the Language** (3) II

An introduction to the study of the changes of form and meaning in English words with special emphasis on semantics.

### Upper Division Courses

*** 101A. Modern Continental Fiction** (3) II

A survey of leading French, Russian, Scandinavian, Italian, and German novelists and short story writers, from Tolstoy and his associates to the present day. Not open to students with credit for Comparative Literature 101A.

*** 106. Creative Writing** (3) I

A writing workshop in which students are given opportunity to criticize each other's work. Emphasis on narrative and description, but freedom to pursue whatever writing forms may interest the student most. May be taken a second time with new material. Not open to students with credit for Journalism 106.

**110. Recreational Reading** (1) I, II

An advanced course in the group reading of modern drama, poetry and fiction.

**113. American English** (3) I

The development of American English; regional and cultural differences in pronunciation, grammar, and vocabulary.

*** 115. The Bible as Literature** (3) I

A study of the narrative, poetry, and prophecy of the King James version of the Bible. Readings, reports, lectures, and discussions. Not open to students with credit for Comparative Literature 115.

**116A-116B. The Age of Elizabeth** (3-3) Year, I

Semester I: Poetry and prose, exclusive of drama. Semester II: The drama to 1642, excluding Shakespeare.

*** 117A-117B. Shakespeare** (3-3) Year, I

The first semester gives special emphasis to the histories and comedies; the second, to tragedy and the dramatic romances.

**118A-118B. Eighteenth Century English Literature** (3-3) Year, I

The first semester emphasizes the social satire of Swift, Pope, Addison, Steele, Dryden, Gay, Prior; and also the first stirrings of the romantic revolt in a number of important poems and prose works. The second semester is devoted to Johnson and Boswell and their circle and to a significant romantic literature antedating the romantic outburst.

*** 119A. English Romantic Poetry** (3) I

The culmination of the romantic movement in the poetry of Wordsworth, Coleridge, Byron, Shelley, and Keats, in relation to the thought of the revolutionary period.

**119B. The Victorian Poetry** (3) II

Tennyson and Browning with their contemporaries and successors, relating English poetry to nineteenth century life and thought.

**120A. The Seventeenth Century: Milton** (3) II (Alternate years)

The poetry and major prose works of Milton, with stress on the development of his art and mind; the political and religious background and the events in which Milton participated.

**120B. The Seventeenth Century: Milton's Contemporaries** (3) II (Alternate years)

The seventeenth century poets and prose writers, excluding Milton; the Metaphysical and Cavalier poets; the beginnings of the essay and biography.

**126A. Romantic and Victorian Prose** (3) I

Romantic and mid-Victorian prose writers, including Coleridge, Hazlitt, Lamb, DeQuincey, Carlyle, Landor, Macaulay, and Mill, related to the literary, political, and social movements of the period.

*** 126B. Late Nineteenth Century British Prose** (3) II

The essays of Arnold, Thomas Huxley, Newman, Pater, Ruskin, and Stevenson. Study of scientific, aesthetic, and ethical backgrounds.

**129. Contemporary British Literature** (3) II

Selected prose and poetry of England and Ireland from 1914 to the present, including Shaw, Yeats, Synge, Joyce, Maugham, Huxley, D. H. Lawrence, Eliot, the Oxford poets, and the principal authors belonging to the two wars.

**131. American Literature: 1820-1860** (3) I

The study of the important romantic writers, with emphasis on the New England group.

**132. The Frontier and American Literature** (3) I, II

The influence of the frontier upon American literature studied through various regions and movements. Examinations of source materials, biographies, and representative writers.

**133. American Literature: 1860-1910** (3) II

The rise of realism in American literature. Influences, foreign and native, which promoted the movement. Definition of realism. The literary creed of the realists. The romantic attack and the realist defense.

* **134. American Literature: 1910 to the Present** (3) I, II

Ideas and forms in representative poetry and prose.

**143A-143B. The English Novel** (3-3) Year, I

The history of the English novel from its beginnings to the present century. Emphasis in the first semester will be on the eighteenth century and in the second semester on the nineteenth century.

* **149. The Study of Poetry** (3) II

A course proceeding from simpler to more complex poetic productions, and designed to bridge the widening chasm between the poet and the ordinary man. Emphasis on current directions in poetry, and on poetry as an oral and auditory art.

**151. Chaucer** (3) I

A study of Chaucer's works, with emphasis on "The Canterbury Tales" and "Troilus and Criseyde."

* **152A-152B. Survey of Drama** (3-3) Year, I

Study of selected tragedies and comedies from Asiatic, European, English, and American literature, with emphasis upon the human problems depicted therein and upon the timelessness of certain themes, such as those of Electra and Medea. Lectures, discussions, and reports on readings. Not open to students with credit for Comparative Literature 152A-152B.

**162. Magazine Fiction** (3) I

Coaching in constructing and writing short stories for commercial publications. Admission by consent of the instructor. Not open to students with credit for Journalism 162.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**191. Advanced Composition** (3) I

A course designed for prospective teachers of secondary school English. This is not a methods course, but a content course in grammar, composition, and journalism. Required of all teaching majors in English; open to other students as an elective.

**192. The English Language** (3) II

The study of the history of the English language, of its words and structure, of the changes in inflections, pronunciation, vocabulary, and meaning, and of its use as an instrument of communication and human living. Open only to seniors and graduate students.

**195. Literary Criticism** (3) I

A historical survey of the principles and practices of literary criticism from Greek times to the nineteenth century. Readings in the works of Aristotle, Horace, Longinus, Sidney, Boileau, Dryden, Lessing, Sainte-Beuve, Coleridge, and Arnold. Open only to senior and graduate students.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**203A-B-C-D. The Critical Study of a Major Author** (2-2-2-2) I, II
A seminar in (A) Shakespeare, (B) Arnold, (C) Mark Twain, or (D) Dickens.

**213A-B-C-D. The Study of a Cultural Period Through Its Literature** (2-2-2-2) I, II
A seminar in (A) the Renaissance, 1500-1660, (B) the Enlightenment, 1660-1780, (C) The Romantic Revolution, 1780-1830, or (D) Industrialism and Democracy, 1830-1914.

**223A-B-C-D. The Study of a Literary Problem** (2-2-2-2) I, II
A seminar in (A) Regionalism in American Literature, (B) the Utopian Theme in Literature, (C) the Idea of the "Gentleman," or (D) European Influences in American Literature.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

## FRENCH

### IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *French* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: In the major, French 1, 2, 3, 4, 5, 6; in other foreign languages, German 1, 2, or Spanish 1, 2, or Latin 1, 2. Six units in elementary German, Spanish, or Latin may also be applied toward general education requirements. Recommended: History 4A-4B. Upper division requirements: A minimum of 24 upper division units, at least 21 units of which must be in French, including French 198. The remaining three units may be selected from French 115, 116; Geography 118; History 121A-121B, 131A-131B, 141, 142, 143A-143B, 144A-144B; or Comparative Literature 101A, 140A-140B, 152A-152B, 159, in consultation with the chairman of the department.

A person majoring in French must have a minor to be decided upon in consultation with his major adviser.

A *major in arts and sciences* is offered in *Romance Languages*. For specific information on this major, refer to the section on Romance Languages.

A *teaching major* is offered in *French* or in *Romance Languages* for the junior high school and general secondary credentials. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *French*. The minor consists of 15 to 22 units in French, six units of which must be in courses carrying upper division credit.

A *teaching minor* is offered in French for the general secondary, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

***1. Elementary** (3) I, II
Pronunciation, oral practice, readings on French culture and civilization, minimum essentials of grammar.

***2. Elementary** (3) I, II
Continuation of French 1. Prerequisite: French 1 or one year of high school French.

***3. Intermediate** (3) I, II
Reading in French of cultural material, short stories, novels or plays; oral practice; outside reading with oral and written reports. Prerequisite: French 2 or two years of high school French.

***4. Intermediate** (3) II
Continuation of French 3. Prerequisite: French 3 or three years of high school French.

**5. Intermediate** (2) I, II
A practical application of the fundamental principles of grammar by means of oral and written work based on French texts. Prerequisite: French 2 or two years of high school French.

**6. Intermediate** (2) II
Continuation of French 5. Prerequisite: French 5 or three years of high school French.

**10. Conversation** (2) I
Practice in the spoken language; practical vocabulary, conversation on assigned topics; simple dialogues and plays. Prerequisite: French 2 or two years of high school French.

**11. Conversation** (2) II
Continuation of French 10. Prerequisite: French 10 or French 3, or three years of high school French.

***15. French Civilization** (2) I
The major currents and characteristics of French culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

***16. French Civilization** (2) II
Continuation of French 15. No prerequisite.

**8A-8B. Scientific Reading** (3-3) I
Reading taken from the fields of chemistry, physics, medicine, zoology, biology, etc. Outside readings of books and periodicals, with written reports. Prerequisite: French 2 with a grade of C or two years of high school French.

### Upper Division Courses

**101A-101B. Conversation and Composition** (3-3) Year, I
Translation into French from moderately difficult English prose. Outside reading of modern French prose, with written reports in French monthly. Readings and oral discussions in French of various facets of French life and culture. Prerequisite: French 4 and 6, or their equivalent, with a grade of C.

**105A-105B. Modern French Drama** (3-3) Year, I (Offered in 1953-54)
Plays of Victor Hugo, de Vigny, de Musset, Scribe, Augier, Dumas fils, Pailleron, Brieux, Hervieu, Maeterlinck, Rostand, and others read and discussed as to subject matter and technique. Outside reading and reports. Prerequisite: French 4 and 6, or their equivalent, with a grade of C.

**107A-107B. Eighteenth Century Literature** (3-3) Year, I

The works of Montesquieu, Voltaire, Rousseau, the Encyclopédistes, as well as the theatre and novel of the period. Outside reading and reports. Prerequisite: French 4 and 6, or their equivalent, with a grade of C.

**110-110B. Modern French Novel** (3-3) Year, I (Offered in 1955-56)

The French novel from Victor Hugo to the present day, including such authors as: Hugo, Dumas, Stendahl, Balzac, Flaubert, Loti, Anatole France, Bourget, Bordeaux, Bazin, Barrès, Romain Rolland, A. Gide, Marcel Proust, and others. Class reading, outside reading, and reports. Prerequisite: French 4 and 6, or their equivalent, with a grade of C.

**111A-111B. Seventeenth Century Dramatic Literature** (3-3) Year, I (Offered in 1954-55)

Reading in class of plays of Molière, Corneille, and Racine. Outside readings and lectures on the background of the seventeenth century in France. Prerequisite: French 4 and 6, or their equivalent, with a grade of C.

*** 115. French Civilization** (2) I

An advanced course in French of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

*** 116. French Civilization** (2) II

Continuation of French 115. Prerequisite: sophomore standing.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**198. Comprehensive Reading and Survey Course** (3) II

Designed to fill up the gaps in the reading done in courses. Class meeting once a week for guidance, reports, and quizzes. Required of all seniors majoring in French.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**214. Contemporary French Literature** (2) I

An intensive study of the current movements and techniques in the novel, poetry, and theatre in France from 1900 to the present day. Class discussion, outside readings, written reports. Prerequisite: Nine units of upper division French and graduate status.

**220. Explication de Textes** (2) II

An introduction to the analytical French approach to the detailed study of literature. Demonstrations by instructor and students. This course aims to give teachers of French a greater mastery of French language and literature. Prerequisite: Nine units of upper division French and graduate status.

**290. Bibliography** (1) See Romance Languages

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)

Master's degree candidates in French are expected to substitute a comprehensive examination for the thesis. In unusual cases a student may write a thesis with the permission of the department.

# GENERAL CULTURE

## IN THE DIVISION OF FOREIGN LANGUAGES

Major or minor work is not offered in general culture courses. These courses are carried as part of the offerings of the Foreign Languages Department. They are conducted in English and are open to all students. A knowledge of foreign language is not required.

### Lower Division Courses

*** 15. French Civilization** (2) I

The major currents and characteristics of French culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

*** 16. French Civilization** (2) II

Continuation of French 15. No prerequisite.

*** 15. German Civilization** (2) I

The major currents and characteristics of German culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English No prerequisite.

*** 16. German Civilization** (2) II

Continuation of German 15. No prerequisite.

*** 15. Spanish Civilization** (2) I

The major currents and characteristics of Hispanic life and culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

*** 16. Spanish Civilization** (2) II

Continuation of Spanish 15 with emphasis on Spanish America. No prerequisite.

### Upper Division Courses

*** 115. French Civilization** (2) I

An advanced course in French culture of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

*** 116. French Civilization** (2) II

Continuation of French 115. Prerequisite: sophomore standing.

*** 115. German Civilization** (2) I

An advanced course in German culture of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

*** 116. German Civilization** (2) II

Continuation of German 115. Prerequisite: sophomore standing.

*** 115. Spanish Civilization** (2) I

An advanced course in Hispanic culture of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

*** 116. Spanish Civilization** (2) II

Continuation of Spanish 115 with emphasis on Spanish America. Prerequisite: sophomore standing.

## GENERAL LANGUAGE

### IN THE DIVISION OF LANGUAGES AND LITERATURE

Major or minor work is not offered in general language.

### Lower Division Courses

**20. Latin and Greek Word Derivation** (3) I
A general and elementary course in philology. A study of Latin and Greek roots of most frequent occurrence in English, and of the English words derived from them. No prerequisite. Not open to students with credit for English 20.

**30. Pronunciation of French, Italian and German** (1-3) II
A course designed especially to meet the needs of singers, radio announcers, etc. No prerequisite. This course may be taken for one, two or three units of credit depending on the individual student's need.

## GEOGRAPHY

### IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *geography* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Geography 1, 2; Geology 1A-1B. Recommended: A reading knowledge of German and French. Upper division requirements: A minimum of 24 upper division units in geography, or 18 units in geography and six units selected from related fields with approval of the chairman of the department. A minor is not required; however, students are urged to complete one minor.

A *teaching major* is not offered in geography; however, courses in geography may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *geography*. The minor consists of 15 to 22 units in geography, six units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in geography for the general secondary credential; however, it may be used as a part of the *social science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

*** 1. Introduction to Geography: Physical Elements** (3) I, II
The nature of maps, weather and climates of the world; natural vegetation; land forms and their associated soils, with reference to their climatic relationships; the seas and their coasts. One field trip. This course is classified as a natural science. (See general education requirements.)

*** 2. Introduction to Geography: Cultural Regions** (3) I, II
The regional differentiation of the world by human activity; areal bases of economy and nationality. Prerequisite: Geography 1.

**3. Elementary Meteorology** (3) I, II
An elementary study of the earth's atmosphere and changes in it which produce our weather and influence human affairs. Special attention given to local conditions, instruments, and records.

*** 10. Economic Geography** (3) I, II
Beginning course in economic geography designed for commerce and economic majors. Prerequisite: Geography 1.

### Upper Division Courses

**112. Geography of California** (3) II
The physiographic regions of California and the cultural landscapes developed by the successive cultural groups. Prerequisite: Geography 1 or consent of instructor.

**113. Climatology** (3) II
A survey of the principal classifications of climates of the world; regional characteristics of climate; relations to soils, vegetation, and human activities. Prerequisite: Geography 1 or consent of instructor.

**117. Geography of Northern and Eastern Europe** (3) I
A study of the cultural development of the countries of northern and eastern Europe in relation to physical background and historical evolution. Prerequisite: Geography 1 or consent of instructor.

**118. Geography of the Mediterranean Area** (3) II
A study of the cultural development of the countries of Southern Europe, Western Asia, and North Africa in relation to physical background and resources. Prerequisite: Geography 1 or consent of instructor.

**119. Geography of South America** (3) II
A study of the physical regions and human geography of South America, including a review of the history of colonization and the exploitation of resources. Prerequisite: Geography 1 or consent of instructor.

**120. Geography of Middle America** (3) I
A study of the physical and human geography of Mexico, Central America, and the islands of the Caribbean, including a review of the history of colonization and the exploitation of resources. Prerequisite: Geography 1 or consent of instructor.

**121. Geography of North America** (3) II
The natural regions of North America, their formation and economic and historical development. Prerequisite: Geography 1 or consent of instructor.

**124. Geography of Asia** (3) I
The cultural regions of Asia, their physical environment, and historical development. Prerequisite: Geography 1 or consent of instructor.

**125. Geography of the Pacific Basin** (3) II
A geo-political approach to the study of the islands in, and the lands marginal to, the Pacific Ocean. Prerequisite: Geography 1, or consent of the instructor.

**135. Geography of the San Diego Area** (3) II
Directed individual urban and rural field work in the San Diego area; the mapping of a small area and making its geographic interpretations. Prerequisite: Geography 1 and 2 or consent of instructor.

*** 145. Conservation of Natural Resources** (3) II
Nature and extent of mineral, soil, water, forest, and wild life resources and their conservation; with particular emphasis on the United States, against a general background of world resources. Conservation philosophies and practices, and their geographic bases. Prerequisite: Geography 1 or consent of instructor.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors program.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**200A-200B. Seminar** (2-2) Year, I

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

# GEOLOGY

## IN THE DIVISION OF PHYSICAL SCIENCES

Major work is not offered in geology. Students preparing for later professional training in geology should plan on completing Chemistry 1A-1B; Physics 4A-4B-4C; Mathematics 3A-3B; Engineering 1A-1B, 21A; and Geology 1A-1B, 21 and 22.

A *teaching major* is not offered in geology; however, courses in this field may be used as part of the *general science major* for the general junior high school credential. For specific information, refer to this credential.

### Minor

A *minor in arts and sciences* is offered in geology. The minor consists of 15 to 22 units in geology, six units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in geology; however, courses in this field may be used as part of the *general science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

**1A. Physical** (4) I
The composition, origin, and distribution of earth materials, and their modification through mechanical and chemical process of change. Three lectures and one three-hour laboratory period weekly with related field study during the semester. (Not open to students who have had Geology 2.)

**1B. Historical** (4) II
Theories of earth origin, and the evolutionary history of the earth as traced through rock and fossil records. Consideration of the Paleontologic Sequence. Three lectures and one three-hour laboratory period weekly, with arrangement for field study and conference during the semester. Prerequisite: Geology 1A or equivalent.

***2. General Geology** (3) I, II
Earth materials and processes, the development of land forms, and a brief consideration of the history of the earth. Open to all students except those with previous credit in geology. No prerequisites.

***3. General Geology Laboratory** (1) I, II
Recognition of common earth materials with experience in both field and map relationships. Designed to accompany Geology 2, but entirely separate and complete in itself. One three-hour laboratory period weekly. Open to all students except those with previous laboratory credit in geology. No prerequisites.

***4. Physiography of United States** (3) II
Geologic history and present features of the main physiographic provinces of United States. Prerequisite: Geology 1A or 2.

**21. Elementary Mineralogy** (4) I
Practice in the determination of common minerals and rocks, their geologic environment, utilization and economic significance. Two lectures and two three-hour laboratory periods weekly. No prerequisite.

**22. Advanced Mineralogy** (4) II

The application of the polarizing microscope and other techniques to the identification of minerals and rocks. Two lectures and two three-hour laboratory periods weekly. Prerequisite: Geology 21.

### Upper Division Courses

**100. Structural Geology** (3) I

The evolution and description of the structural and topographical features of the earth. Faulting, folding, and orogenic forces with practical illustrations from the North American Continent and California geologic conditions. Lectures, discussions, and occasional field trips. Prerequisite: Geology 1A-1B or equivalent.

**101. Museum Work** (1-2) I, II

Selection and preparation of materials for the college museum collections. Emphasis upon creation of self instructive displays for use on the elementary and secondary as well as the collegiate level. Prerequisite: Geology 1A-1B, and consent of the instructor. May be repeated for maximum not to exceed six units where quality of work and student capacity justify.

**102. Geology of California** (3) II

Directed reading and group discussion of California geologic literature. Designed to acquaint the student not only with the important structural and geomorphic units of the State but with the variety of important source materials of geologic literature as well. Use of bibliographies, state and federal surveys, research publications, etc. Prerequisite: Geology 1A-1B, and consent of the instructor.

**108. Field Geology** (1-4) I, II

Field instruction in geologic methods. Reconnaissance of adjacent unmapped areas with preparation of a geologic map and accompanying report. Work accomplished primarily on week-ends with minimum classroom activity during the week for organizational details. Prerequisite: Geology 1A-1B, and consent of the instructor.

**166. Honors Course** (Credit to be arranged) I, II

Special work in any of several phases of geologic science for students of demonstrated ability. Refer to the Honors Program.

**199. Special Study** (1-6) I, II

Individual study in field, library, laboratory, or museum work. Six units maximum credit. Prerequisite: permission of instructor.

## GERMAN

### IN THE DIVISION OF LANGUAGES AND LITERATURE

Major or minor work is not offered in German; however, students desiring to carry advanced work in German should consult with the Chairman of the Department of Foreign Languages.

### Lower Division Courses

***1. Elementary** (3) I, II

Pronunciation, oral practice, readings on German culture and civilization, minimum essentials of grammar.

***2. Elementary** (3) I, II

Continuation of German 1. Prerequisite: German 1 or one year of high school German.

***3. Intermediate** (3) I, II

Reading in German of cultural material, short stories, novels or plays; oral practice; outside reading with oral and written reports. Prerequisite: German 2 or two years of high school German.

***4. Intermediate** (3) II

Continuation of German 3. Prerequisite: German 3 or three years of high school German.

**5. Intermediate** (2) I, II

A practical application of the fundamental principles of grammar by means of oral and written work based on German texts. Prerequisite: German 2 or two years of high school German.

**6. Intermediate** (2) II

Continuation of German 5. Prerequisite: German 5 or three years of high school German.

**10. Conversation** (2) I

Practice in the spoken language; practical vocabulary; conversation on assigned topics; simple dialogues and plays. Prerequisite: German 2 or two years of high school German.

**11. Conversation** (2) II

Continuation of German 10. Prerequisite: German 10, or German 3, or three years of high school German.

*** 15. German Civilization** (2) I

The major currents and characteristics of German culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

*** 16. German Civilization** (2) II

Continuation of German 15. No prerequisite.

**8A-8B. Scientific Reading** (3-3) I

First semester, readings in scientific reader on chemistry, physics, etc.; occasional written reports on scientific subjects read outside of class; sight reading. Second semester, readings in special scientific or technical works; weekly written reports required; sight reading. Prerequisite for 8A: German 2 with a grade of C or two years of high school German; for 8B: German 8A or German 3, with a grade of C, or three years of high school German.

### Upper Division

**101A-101B. Advanced Conversation and Composition** (3-3) Year, I
(Not offered 1952-53)

Translation into German of moderately difficult English prose. Free composition in German, written and oral. Outside reading of modern German plays and prose, dealing with various aspects of German life and culture, with written reports and oral discussions in German. Oral and written practice in conversational German. Prerequisite: German 4 and 6, or their equivalent, with a grade of C.

*** 115. German Civilization** (2) I

An advanced course in German culture of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

*** 116. German Civilization** (2) II

Continuation of German 115. Prerequisite: sophomore standing.

## HEALTH EDUCATION

### IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

An *arts and sciences major* is not offered in health education.

A *teaching major in health education* is offered for the general secondary credential. This major is designed around the plan for a general major and may be used for the A.B. degree by students who have been admitted to candidacy for the general secondary credential and have completed a minimum of eight units in professional education courses, including Education 184A-184B, by the date of degree candidacy. For a statement of requirements refer to the general secondary credential.

## Minor

A *minor in arts and sciences* is offered in *health education.* The minor consists of 15 to 22 units in health education, nine units of which must be in courses carrying upper division credit. Courses will be determined in consultation between student and departmental representative.

A *teaching minor in health education* is offered for the general secondary and the special secondary credentials. For a statement of requirements, refer to the credential.

## Lower Division Courses

***21. Principles of Healthful Living** (2) I, II

An approach to the personal health problems of college students. Scientific health information is provided, and an attempt is made to promote wholesome attitudes and desirable practices relating to healthful living. Includes instruction as required by statutes on safety, fire prevention, and harmful effects of alcohol and tobacco. Required of all freshmen.

**65. Community Health** (3) I, II

Community health problems; the role of the citizen, of the public, and of community health agencies in promoting and protecting the health of the community.

***90. Physiology of Reproduction** (1) I, II

A series of lectures and discussions dealing with normal and abnormal physiology and anatomy of reproduction; facts and frauds in sex hygiene, and related topics. Not open to students with credit for Home Economics 90.

## Upper Division Courses

**145. Safety Education and Accident Prevention** (3) II

Highway safety, the fundamentals of safety programs and techniques in home, school and industry. Partially satisfies the requirements for state credential in driver education.

**151. Health Education for Teachers** (2) I, II

The teacher's function in the different aspects of the school health program; environment, services, and instruction. Special attention is given to materials and material sources, and to community relationships and resources. Separate sections for elementary and secondary teachers are offered.

**152. Health Education Programs** (3) I

The construction of the health education program including objectives, scope and sequence of instruction, teaching methods, source materials and evaluation procedures; practice in building instructional units.

**153. Administration of the School Health Program** (3) II

Administrative responsibilities and procedures in organizing and conducting the school health program. Principles, policies, and practices involved in instruction, service, environment, and community relationships. Partially fulfills Health and Development Credential requirement for nurses.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## Graduate Courses

**200. Evaluation Procedures in Health, Physical Education and Recreation** (2) I

A study of tests and measurements in the profession with practice in their use, construction and interpretation of results.

**202. Problems in Health Education** (2) (Alternate Years)

Current problems in Health Education, studied through a review of the literature, discussion of trends, observation of school situations, together with the analysis and evaluation of actual problems. Written reports required.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3) I, II
Guidance in the preparation of a project or thesis for the master's degree.

# HISTORY
## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *history* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division: Required in the major: History 4A-4B, or 8A-8B, or 9A-9B. Required in general education: Political Science 1A-1B, or 71A-71B, or Economics 1A-1B. Two of the above history courses are recommended for students planning to major in history, and it is suggested that History 4A-4B be included as one of them. No freshman shall enroll in more than one lower division course in history during any one semester without the permission of the department. Upper division requirements: A minimum of 24 upper division units in history, including History 199, and a minimum of a year of concentration in each of three of the following fields: (a) Ancient and Medieval; (b) Modern Europe; (c) United States; (d) Latin America; (e) Pacific Area and the Far East. These courses must be selected under the guidance of the chairman of the department. A reading knowledge of one foreign language is strongly recommended. History majors are not required to complete a minor.

A *teaching major* is not offered in history; however, courses in history may be used as part of the *teaching major in social sciences* for the general secondary and general junior high school credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *history.* The minor consists of 15 to 22 units in history, nine of which must be in courses carrying upper division credit, including a year course.

A *teaching minor in history* is offered for the general secondary credential. Courses in history may be used as part of the social teaching science minor for the special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Explanation of Courses

NOTE: History 17A-17B does not count toward credit for a major in history.

Any history course, with the exception of History 270A-270B, may be taken either semester, the A part not being a prerequisite to the B part.

### Lower Division Courses

*** 4A-4B. History of Modern Europe** (3-3) Year, I, II
A survey of European society, institutions and politics from about 1500 to the present. Fall semester: 1500-1799. Spring semester: 1799 to the present.

*** 8A-8B. History of the Americas** (3-3) Year, I
Survey of the history of the western hemisphere from its discovery to the present time. This year course meets the graduation requirement in American history, institutions and ideals.

**9A-9B. History of the Pacific Ocean Area** (3-3) Year, I
A general survey of the history and civilization of the peoples of the Pacific, with special emphasis upon exploration, trade, international rivalries, and social evolution of the island areas.

*** 17A-17B. History of American Civilization** (3-3) Year, I

Survey of the political and social development of the United States, with emphasis upon the rise of American civilization and ideals. This year course meets the graduation requirement in American history, institutions and ideals, the United States Constitution, and California State and Local Government.

## Upper Division Courses

**111A-111B. Ancient History** (3-3) Year, I
(Offered in 1953-54 and alternate years)

Fall semester: Greek history to the Roman conquest. Spring semester: Roman history to the fifth century A.D.

*** 121A-121B. Medieval History** (3-3) Year, I
(Offered in 1952-53 and alternate years)

Survey of the main events of European social, cultural, religious, political and economic history, between 500 and 1400 A.D.

**131A-131B. Renaissance, Reformation and Counter-reformation** (3-3) Year, I
(Offered in 1953-54 and alternate years)

A history of personalities and events connected with the social, political, cultural, economic and religious change between 1300 and 1600.

**141. Europe in the Seventeenth and Eighteenth Centuries** (3) I

European thought, politics and international relations from the Thirty Years' War and Louis XIV to 1763.

**142. The French Revolution and Napoleonic Era** (3) II

Study of conditions in France prior to 1789, the Revolution, 1789-1799, the organization of France and Europe under Napoleon, character of his empire, and the reorganization of Europe at the Congress of Vienna.

**143A-143B. Europe in the Nineteenth Century** (3-3) Year, I

Reaction in Europe, the development of nationalism, the impact of industrialism, and the background of World War I. Covers period 1815-1914.

**144A-144B. The World Wars** (3-3) Year, I
(Offered in 1952-53 and alternate years)

Developments from 1914 to the present. Semester I: World War I, the peace settlements, and the background of World War II. Semester II: World War II and its aftermath.

**151A-151B. History of England** (3-3) Year, I

Political, constitutional, social and economic developments since 1066. Designed for prelegal students, majors in English, and as a background for American History.

**156A-156B. History of British Expansion** (3-3) Year, I

Study of the growth and development of the British Empire from the first overseas empire to the present. History 156B not open to students with credit for Political Science 160.

**161. Mexico and Caribbean Countries** (3) I

Special attention to relations between the United States and these countries, and to recent developments in Mexico.

**162. South America Since Independence** (3) II

Republics of South America. Development of nationality, struggles for political stability, exploitation, diplomatic and commercial relations with the United States, and other international problems of South America. Survey of present-day conditions.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**171A-171B. Rise of the American Nation** (3-3) Year, I
(Offered in 1952-53 and alternate years)

Semester I: English colonization in North America, development of colonial institutions and political customs, and areas of international conflict during 18th century. Semester II: The Revolution and establishment of the government under the Constitution of 1787. Covers period to 1814.

*** 172A-172B. American Constitutional Development** (3-3) Year, I

A study of the work of the Convention of 1787 and of significant phases of American constitutional law. Not open to students with credit for Political Science 139A-139B. This year course meets the graduation requirement in American history, institutions and ideals, United States Constitution, and California State and Local Government.

**173A-173B. The Expansion of the United States** (3-3) Year, I
(Offered in 1953-54 and alternate years)

Lectures and readings on Jacksonian democracy, territorial expansion and the Mexican War, the slavery controversy, Civil War and Reconstruction, and attention to the growth and progress of the United States to the close of the nineteenth century.

**175. The United States in the Twentieth Century** (3) II

The rise of the United States to the position of a world power; social and economic problems posed by the machine age; political action and adjustment, actual and proposed, intended as solutions for these problems.

**176A-176B. American Foreign Policy** (3-3) Year, I

Lectures and readings in the field of American foreign relations since 1776, with special emphasis, in the second semester, upon affairs since 1900. A general survey course. Not open to students with credit for Political Science 158A-158B.

*** 179A-179B. Intellectual History of the American People** (3-3) Year, I

A study of the ebb and flow of ideas in the United States since the founding of the English colonies, with special attention devoted to social and political thought. This year course meets the graduation requirement in American history, institutions and ideals.

**181A-181B. History of the West** (3-3) Year, I

The American frontier: Expansion, exploration, settlement and building of the new states, with emphasis upon frontier problems of defense, communications, finance, etc.; the development of cultural institutions. A critical examination of the causes, effects and results of the frontier experiences of the American people.

**189. History of California** (3) I, II

The economic, social, intellectual, and political development of California from the earliest times. Emphasis will be on the founding of California, international struggles for California; American conquest and Gold Rush Era; development of California as a state. This course meets the graduation requirement in California State and Local Government.

**191A-191B. History of the Far East** (3-3) Year, I

Particular emphasis during the first semester upon the history, both internal and international, of the Far East through the nineteenth century. The second semester will be devoted to a consideration of developments in the twentieth century.

**192. History of Russia** (3) II

A general survey emphasizing the period since Peter the Great; the Russian Empire's relations with its national minorities; Tsarist experiments in political and social reform; revolutionary socialism; the development of the U. S. S. R.

**193. History of China** (3) I

A survey of Chinese history and institutions from antiquity to the present.

**194. History of Japan** (3) I (Offered in 1953-54 and alternate years)

A general survey of the political, economic and social development from the foundation of the empire to contemporary times. Special attention will be given to religions, philosophy, literature, and the arts.

**198. Special Course for Advanced Students** (2) II

Required of all students with a history major. To be attended during the senior year. Open to social science majors.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**270A-270B. Seminar** (2-2) Year, I

Required of all candidates for the general secondary credential with a social science major, and for the M.A. degree in history or social science. Prerequisite: permission of instructor. 270A is a prerequisite for 270B.

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

## HOME ECONOMICS

### IN THE DIVISION OF FINE ARTS

Major work is not offered in home economics. Students may elect a general major with one of the fields of concentration in home economics. For specific information, refer to the Home Arts Curriculum in the section of the bulletin entitled: Preprofessional and Vocational Curricula.

A *teaching major* is not offered in home economics; however, students planning to complete requirements for a special secondary credential in home economics should take the following courses in addition to courses in home economics: Chemistry 2A-2B. Recommended: Physics 2A-2B, Biology 1 or 3, Zoology 165, English 2A, History 17A-17B or Political Science 71A-71B, Health Education 90, Art 6A, 8, and 61B, Business 20, and Sociology 135.

### Minor

A *minor in arts and sciences* is offered in *home economics.* The minor consists of 15 to 22 units in home economics, nine units of which must be in courses carrying upper division credit. Lower division requirements: Home Economics 2 or 62 and 10 or 11. Upper division requirements: Home Economics 105 or 100, 150 and 170. Electives may be chosen from Home Economics 1, 55, 61A, 101, 135, and 160A.

A *teaching minor in home economics* is offered for the general secondary, general junior high, and special secondary school credentials. For statement of requirements, refer to these credentials. A student with a minor in home economics may teach home economics in junior high school with a general junior high school credential. Through counseling with the adviser in home economics, a student may so extend the minor in home economics that the special secondary credential in home economics may be obtained with a minimum amount of additional work in the field.

### Lower Division Courses

*** 1. General Home Arts** (3) I, II

A general education course in family life education. Consideration of necessary preparation for marriage with emphasis on a stable, happy democratic family life; family budgets and money management; finding a home to buy, build or rent; child care, proper training and guidance; home safety. Open to men and women.

***5. Foods** (3) I

A general education course in practical arts. Deals with the problems faced in planning meals in which the foods are well cooked and appetizing and serving meals in ways suited to the family situation; safety in the kitchen. Nutrition, economic and management problems are stressed. One lecture and two laboratory sections per week.

***10. Clothing Fundamentals** (3) II

A general education course in practical arts. Selection of clothing with self-analysis as a basis; wardrobe planning and buying procedures. Commercial patterns and their adaptation; fitting and construction principles applied to cottons.

**11. Advanced Clothing** (3) I

Fitting and construction processes applied to wool, silk, and synthetics, emphasizing fundamental principles of handling. Prerequisite: Home Economics 10 or equivalent.

**55. Household Equipment** (2) II

Selection, methods of operation and care of household appliances. Equipment of various types used and tested for safety, efficiency and cost of operation. Efficient kitchen arrangement and storage space in relation to the well-being of the family.

**61A. Nutrition** (2) II

Practical problems of nutrition including food requirements, food selection, and food habits. (For men and women.)

**61B. Nutrition Laboratory** (1) II

Nutrition principles applied to food preparation, meal preparation and special diets. Open to prenursing students. One three-hour laboratory section per week.

**62. Food and Nutrition** (3) II

Selection, purchase, and service of meals with a consideration of nutritional needs of family groups, food habits and social customs. Open to all students except prenursing students.

**90. Physiology of Reproduction** (1) I, II

A series of lectures and discussions dealing with normal and abnormal physiology and anatomy of reproduction; facts and frauds in sex hygiene, and related topics. Not open to students with credit for Health Education 90.

### Upper Division Courses

**100. Advanced Clothing Design (Tailoring)** (3) II

Principles of tailoring; planning and construction of coats and suits. Prerequisite: Home Economics 11.

**101. Clothing Selection** (3) I

Aims to develop taste in dress through a better understanding of the relation of art principles, psychology, fashion trends, personality and physical characteristics to individuals. History of costume is studied briefly as an aid in understanding recurring cycles in fashion. A consideration of buymanship information necessary in wardrobe selection to insure satisfaction and economy.

**105. Family Meals** (3) II

This course deals with the planning, preparing, and serving of attractive, well-balanced meals for different income levels, and for various occasions. The student will have responsibility for menu making, food purchasing, and meal management.

**120. Demonstration Methods** (1) Irregular

Class discussions and demonstrations with emphasis upon individual experience in organizing demonstration materials and in acquiring demonstration techniques. Observation and evaluation of professional demonstrations. Prerequisite: Nine units in Home Economics courses.

***135. Marriage and the Family** (3) I, II

Preparation for marriage. Prediction scales for evaluating success or failure in marriage. Parent-child relationships; factors in successful and unsuccessful marriages; higher education and the birth rate; married women in industry and professions; desertion and divorce. Not open to students who have credit for Sociology 45 or 135. A general education course in social science or in family life education.

***150. Home Management** (3) I, II

A general education course in family life education. Integration of the learning activity around a living situation with emphasis on cooperation and establishment of family goals. Management for more successful use of the resources of time, energy, and money to enrich personal and family life; use of credit, value of insurance and balancing budgets. Open to men and women.

**160A. Merchandise Analysis—Textiles** (2) I

Properties, uses, selection and care of textile fibers and fabrics. The aim is to develop judgment in the evaluation involved in the selection of textiles. (Open to men and women.)

**160B. Merchandise Analysis—Nontextiles** (2) II

Properties, uses, selection and care of metals, glass, rubber, fur, enamels and plastics. (Open to men and women.)

**161. General Textiles** (2) II

Factors involved in fundamental weaves, fabrics, color, and finishes with reference to selection of fabrics for home decoration and clothing. Relationships to durability and cost are emphasized. Open to all students except merchandising majors.

***170. Child Care and Development** (3) I

A general education course in family life education. A study of the prenatal and preschool periods of child development; particular emphasis is given to the nutrition and physical development of the young child. Directed observation and participation in the nursery school.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

# INDUSTRIAL ARTS

## IN THE DIVISION OF PHYSICAL SCIENCES

Courses in industrial arts lead to the following objectives: (1) a minor in arts and sciences; (2) a teaching minor for several of the teaching credentials; and (3) general education and individual interests. Many of the courses will prove valuable to students desiring practical shop experience on an elective basis.

Although major work is not offered in industrial arts at this time, a number of upper division courses are now available and additional upper division courses are planned for the near future.

Students planning to continue work in industrial arts which may lead to the special secondary teaching credential can complete the lower division requirements at this college. These students should consult with the departmental representative regarding an appropriate selection of courses. The following lower division courses are recommended: Industrial Arts 2 or 21, 31 or 32, 51 or 52, 61 and 71; Art B; Chemistry 2A; Mathematics C, D, and E (or high school equivalent); Physics 2A-2B.

### Minor

A *minor in arts and sciences* is offered in industrial arts. The minor consists of 15 to 22 units in industrial arts, nine units of which must be in courses carrying upper division credit.

A *teaching minor* in industrial arts is offered for the general junior high, special secondary, and general secondary credentials. Industrial arts may also be used as a second minor for the general elementary credential. For specific information, refer to the outline of requirements for these credentials.

### Lower Division Courses

**2. Mechanical Drawing** (3) I, II, Summer

Use and care of drafting equipment, freehand lettering, technique of the finished drawing including inking, simple orthographic projection, introduction to dimensioning problems, simple section and auxiliary views, fundamentals of pictorial drawing in isometric, oblique, and cabinet projection. One lecture and two laboratory sections per week. Not open to students with credit for Engineering 2.

***5. Introductory General Shop** (3) I

A general education course in practical arts utilizing tools and material of industrial arts to gain understanding of the industrial age. Students will explore their abilities by solving practical problems. Activities include individual and group problems, field trips, and audio-visual aids.

***6. Intermediate General Shop** (2) II

A general education course in practical arts. An approach similar to that of Industrial Arts 5 will be used. Students may select problems to meet their needs, interests, and objectives. Safety consciousness and good work habits will be emphasized.

**21. Industrial Drafting** (3) II

Introduction to industrial drafting procedures. Principles of orthographic projection as applied to aeronautical and machine drawings, sheet metal, furniture and related production drawings, and electrical and pipe layouts. One lecture and two laboratory sections per week. Prerequisite: Industrial Arts 2 or one year of high school mechanical drawing.

**31. Elements of Metalwork** (3) I

Demonstration and practice in the use of hand tools commonly used in bench and sheet metal including fundamentals of pipe fitting and welding. Discussion of the principles and techniques of metalworking for the prospective shop teacher. One lecture and two laboratory sections per week. (Required for the Special Secondary credential in Industrial Arts.)

**32. Elements of Machine Operation** (3) I, II

Demonstration and practice in the safe operation of machine shop equipment including drill, milling machine, shaper, and precision grinder for the shop teacher. May be substituted for Industrial Arts 31 to meet requirements for the Special Secondary credential in Industrial Arts. One lecture and two laboratory sections per week.

**51. Elements of Woodwork** (3) II

Training in the use of hand tools commonly used in the woodshop. Discussion and demonstration of the principles and techniques of woodwork and woodworking machines for the teacher. One lecture and two laboratory sections per week. (Required for the Special Secondary credential in Industrial Arts.)

**52. Advanced Woodwork** (3) I

Demonstration and practice in the safe operation of woodworking machines including the lathe and in the fundamentals of furniture joinery. Training in setting up and maintaining machines. One lecture and two laboratory sections per week. Prerequisites: Industrial Arts 51 or one year of high school woodwork.

**61. Elements of Electricity** (3) I, II

Demonstration of the basic principles of electricity as related to the home and to industry; practice in the use of tools, meters and materials in the laboratory and as applied to home appliances and the design and construction of simple devices suitable to the high school shop. One lecture and two laboratory sections per week. (Required for the Special Secondary credential in Industrial Arts.)

**62A-62B. Applied Electronics Laboratory** (3-3) Year, I

Practice in the construction and testing of electronic devices, such as radio receivers, television receivers, photocell systems, vacuum tube voltmeters, special control, and testing devices. Two hours of discussion and six hours of laboratory per week. Prerequisite: Industrial Arts 61 or permission of instructor.

**71. Elements of Transportation Machinery** (3) I

Demonstration and study of the theory of internal combustion engines as applied to transportation. Practice in maintenance, tune up and minor repair of automobiles. Consideration of the problems of safe driving and the development of the necessary habits and attitudes. Two lectures and one laboratory section per week. (Required for the Special Secondary credential in Industrial Arts.)

## Upper Division Courses

**121. Advanced Mechanical Drawing** (3) I, II

Lettering practice, orthographic and isometric projection of machines and parts and of furniture. Theory and practice of dimensioning, working and production drawings, reproduction and principles of perspective. Intended for the prospective teacher. One lecture and two laboratory sections per week. Prerequisite: Industrial Arts 21.

**131. Advanced Metalwork** (2) I, II

Additional demonstration and practice on metalworking machines including press work, welding and forging, sheet metal forming, metal spinning and pipe layout and fitting. Two laboratory sections per week. Prerequisite: Industrial Arts 5 or 31.

**133A-133B. Advanced Machine Shop Practice** (3-3) Year, I, II

A year course in the principles and practice of machine tool operation stressing tool making, instrument work and modelmaking. One lecture and two laboratory sections per week. Prerequisite: Industrial Arts 32 or permission of instructor.

**136. Forging and Welding** (2) (May not be offered in 1951-52)

Principles and techniques of forging and welding including oxy-acetylene and electrical as applied to repair work and the fabrication of ornamental metal work. Two laboratory sections per week. Prerequisite: Industrial Arts 5 or 31.

**151A-151B. Furniture and Cabinet Making** (2-2)

(May not be offered in 1952-53)

A year course in advanced woodwork problems. Design and construction of furniture and mill cabinet work. Two laboratory sections per week. Prerequisite: Industrial Arts 51 or 52.

**152. Finishing and Painting** (2) I

Theory, demonstration and practice of a wide variety of wood and metal finishing processes, including fillers, stains, varnishes, enamels and lacquers. Two laboratory sections per week. Prerequisite: Industrial Arts 5 or 51 or 52.

**153. Patternmaking and Woodturning** (3) II

Demonstration and practice of the principles of patternmaking and woodturning. Development of skill in woodturning operations. One lecture and two laboratory sections per week. Prerequisite: Industrial Arts 51 and 52 or equivalent.

**190. Experimental Shop** (1 or 2) I, II

Individual shop work on complex projects on an experimental basis. Prerequisite: Permission of the instructor. May be repeated with permission of the instructor.

**193. Industrial Arts Organization and Management** (2) II

(Not offered in 1952-53)

Study of the organization of Industrial Arts in secondary schools, review of project requirements and methods of developing student participation in shop management. Two lectures per week.

**194. Recent Trends in Industrial Arts Education** (2) I

(Not offered in 1952-53)

Survey of current trends and practices in the field of Industrial Arts in Secondary Education. There will be opportunity for individual work on related problems of interest to member of the class. Two lectures per week.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

# JOURNALISM

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *journalism* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division: Required in the major: Journalism 51A-51B, Business 2A (or equivalent performance in typing), and Speech Arts 81. Required in general education: Physical Science 10. Recommended: Business 27, Economics 1A-1B, English 20 or General Language 20, English 61. Upper division requirements: 24 upper division units in journalism to include Journalism 102 and 151. A minor is not required.

### Minor

A *minor in arts and sciences* is offered in journalism. The minor consists of 15 to 22 units in journalism, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in journalism.

### Lower Division Courses

**51A. Elements of Journalism** (3) I

Theory of news writing; introduction to the newspaper as an institution in modern society. Prerequisites: Sophomore standing and grade of B in freshman composition, or consent of instructor; and Business 2A (may be taken concurrently) or equivalent, with 30-word-per-minute performance.

**51B. News Gathering and Reporting** (3) II

Practice in writing news copy, both for class criticism and for publication in *The Aztec.* Prerequisite: Grade of C or better in Journalism 51A.

**92. Special Projects** (1-3) I, II

Special work in journalism by arrangement with instructor. Work on *The Aztec,* yearbook, other publications, with consent of instructor. Total credit that may be earned in Special Project work limited to eight units.

### Upper Division Courses

**101. Interpretative Writing** (3) II

Practice in gathering material and writing articles for specialized areas, with emphasis on the business press. Production of eight articles and marketing of at least one article required. Prerequisite: junior standing and permission of instructor.

**102. Law of the Press** (3) II

Understanding of the law as it affects the privileges and defines the duties and responsibilities of the press. Problems of constitutional law, libel, privacy, and postal regulations pertinent to the press, with emphasis on the covering of public affairs.

**106. Creative Writing** (3) I

A writing workshop in which students are given opportunity to criticize each other's work. Emphasis on narrative and description, but freedom to pursue whatever writing forms may interest the student most. May be taken a second time with new material. Not open to students with credit for English 106.

**122. Public Opinion Measurement** (3) II

The history, methods, and problems of public opinion and attitude measurement. Emphasis will be placed upon the polling of consumers and voters. Students will be given field experience. Not open to students with credit for Psychology 122.

**132. Propaganda and Public Opinion** (3) II

A study of the forces which mold the American public mind, the practice of propaganda, a description and analysis of public relations, pressure groups and their effect in American public life. Not open to students with credit for Political Science 122.

**142. State Government** (3) II
A study of the political structure and its operation used in the carrying on of the functions exercised by the states; state-federal relations; state-local government relations; particular emphasis on California government. This course meets the graduation requirement in California state and local government. Not open to students with credit for Political Science 142.

**143. Municipal and County Government** (3) I
A study of the organization and its operation used to carry into effect the functions assigned to local governmental units; particular emphasis upon local government in California. This course meets the graduation requirement in California state and local government. Not open to students with credit for Political Science 143.

**151. Advanced Editing and Reporting Techniques** (3) I
Editing copy, writing headlines, making up pages, handling telegraph copy. Practice in specialized forms of journalistic writing. Prerequisite: Journalism 51A-51B.

**152. High School Journalism** (3) II
Methods of conducting high school journalism classes. Editorial, business and mechanical aspects of school publication work, with emphasis on copy editing, headline writing and layout. Not open to journalism majors. Prerequisite: grade of C or better in Journalism 51A and approval of instructor.

**162. Magazine Fiction** (3) I
Coaching in constructing and writing short stories for commercial publications. Admission with consent of instructor. Not open to students with credit for English 162.

**166. Honors Course** (Credit to be arranged) I, II
Special study open to members of the Honors Program in journalism. Refer to the Honors Program.

**183. Radio Continuity and News Writing** (3) II
Correlates news editing and writing with announcing styles. Radio news procedure and organization of a radio news staff; analysis of repertorial and commentary styles. Includes production techniques of "on-the-spot" and multiple point pickup broadcasts. Registration with consent of the instructor. Not open to students with credit for Speech Arts 183.

**185. Advertising Copy and Layout** (2) I
Introduction to principles and techniques of copy writing; types of copy; preparation of layouts; mechanical methods employed by the artist, engraver and printer; legislation and regulations affecting advertising claims. Prerequisite: Business 27, or consent of instructor. Not open to students with credit for Business 185.

**191A-191B. Applied Journalism** (1-3) (1-3) I, II
A special course in which students work in the San Diego area on magazines, city and county newspapers, and on public relations, publicity, and advertising staffs of local, civic and business groups. Prerequisites: Journalism 51A-51B and permission of instructor.

**192. Special Projects** (1-3) I, II
Special work in journalism by arrangement with instructor. Work on *The Aztec*, yearbook and other publications, with consent of instructor. Total credit that may be earned in Special Project work limited to eight units.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

# LANGUAGE ARTS

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *language arts major in arts and sciences* is offered for the A.B. degree to students who have been admitted to the general secondary credential program in teacher education and provided that a minimum of eight units in professional education courses be completed by date of degree candidacy. Requirements for the major are in addition to 45 units in general education courses. A minor selected from an appropriate teaching minor for the general secondary credential is required of students taking this major. A minimum of 15 units in this minor, six units of which must be in upper division courses, must be completed for the A.B. degree. The additional units required for the credential may be completed either in undergraduate or postgraduate work.

Lower division requirements for the major: Six units selected from English 50A-50B, or 52A-52B, or 60A-60B (or two upper division courses may be substituted, selection to be made from English 116A-116B, or 118A-118B, or 119A-119B, or 120A-120B, or 126A-126B, or 143A-143B); Journalism 51A; Speech Arts 60A, or 60B, or 55A, or 55B; Speech Arts 81. Upper division requirements: 27 units to include the following courses: English 192; English 106 or 191; English 131, or 132, or 133, or 134; English 117A, or 117B, or 152A, or 152B; Journalism 152; Speech Arts 108, 159, and 176; Speech Arts 191, or 192A, or 192B. If lower division English sequence is taken in American Literature, the upper division course work in literature should be taken in other areas.

A *teaching major in language arts* is offered for the general secondary school credential. For a statement of requirements, refer to this credential.

*Minor* work is not offered in language arts.

# LATIN

## IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* or *minor* work is not offered in Latin.

### Lower Division Courses

*** 1. Elementary** (3) I, II

Study of the Latin language and Roman culture, with reading of selected prose passages.

*** 2. Elementary** (3) I, II

Continuation of Latin 1. Prerequisite: Latin 1 or one year of high school Latin.

*** 3. Intermediate** (3) I

Reading of selected passages emphasizing the contribution of the ancient culture to our own. Prerequisite: Latin 2 or two years of high school Latin.

*** 4. Intermediate** (3) II

Continuation of Latin 3. Prerequisite: Latin 3 or three years of high school Latin.

# LIBRARY SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

*Major* or *minor* work is not offered in library science.

### Lower Division Courses

*** 10. Use of the Library** (2) I, II

The chief object is to give a working knowledge of some of the resources of the library which every teacher and student should understand—the decimal classification, the card catalog, periodical indexes, and the most important reference books, together with some instruction in the preparation of bibliographies. The course will be a requirement of those students added to the library's staff of student assistants, although it will not prepare the student to become a librarian. A general education course in practical arts.

# LIFE SCIENCE

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in *life science* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Zoology 1A-1B or Biology 3 and 4; Zoology 20 or Physiology 1A; Botany 2A-2B or 1 or Bacteriology 1; Chemistry 1A-1B or 2A-2B; Physics 2A-2B. Upper division requirements: A minimum of 24 upper division units in zoology, bacteriology and botany of which six units may be from a related field. The plan for this major must be with the approval of the Chairman of the Division of Life Sciences. A minor is not required of students majoring in life science.

A *major in arts and sciences* is offered in *life science* for the B.S. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Bacteriology 1 or 101, Botany 2A-2B, Zoology 1A-1B, Chemistry 1A-1B or 2A-2B, Physics 2A-2B. Upper division requirements: 36 upper division units in zoology, bacteriology and botany or 27 units in these fields with nine units in a related field. The plan for this major must be with the approval of the Chairman of the Division of Life Sciences. A minor is not required of students majoring in life science.

Note: Twelve units in natural science courses in the major for the A.B. or B.S. degree may be applied toward requirements in general education natural science courses.

A *teaching major in life science and general science* is offered for the general secondary school credential and a *teaching major in general science* is offered for the general junior high school credential. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *life science.* The minor consists of 15 to 22 units in life science to include Biology 3 and 4, or the equivalent, and a minimum of nine units in courses carrying upper division credit selected with approval of the chairman of the division.

A *teaching minor in life science and general science* is offered for the general secondary, special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

# MARKETING

## IN THE DIVISION OF BUSINESS

### Major

A *major in arts and sciences* is offered in *business* for the B.S. degree with specialization in marketing. Courses in the major are in addition to 45 units in general education courses. Lower division requirements in the major: Business 8, 14A-14B, 18A-18B, 20, 24, 25, 27; Economics 1A-1B; Art 7. (Business 120 and Art 107 may be taken in the upper division in place of Business 20 and Art 7.)

Upper division requirements: 36 upper division units to include Business 121, Economics 140, one of the following courses: Business 123, 153, Economics 111, 170; and 27 units chosen from Business 120, 123, 124, 137, 153, 154, 181, 184, 185, 186, 187A, 187B, 188, 189, 196, 198A, 198B, Home Economics 160A, 160B, Art 107. A minor is not required of students majoring in business.

A *teaching major* is not offered in the marketing field, but is offered in *business education.* Marketing may be included as the areas of specialization.

### Minor

A *minor in arts and sciences* is offered in *business* with specialization in marketing. The minor consists of 15 to 22 units in business, six units of which must be in courses carrying upper division credit. Students electing business as a minor with specialization in marketing should consult with the adviser in marketing for selection of courses.

A *teaching minor* is not offered in business, but is offered in *business education* for the general secondary school credential. For statement of requirements, refer to the credential.

### Courses in Marketing

All business courses in this department for the major or minor are listed in this section of the bulletin under Business.

## MATHEMATICS

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in *mathematics* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Mathematics 1, or equivalent (unless exempted by examination); Mathematics 3A-3B and 4A. Recommended: Business 2, Engineering 1A, 21; Physics 4A-4B or Physics 2A-2B, 3A-3B. A reading knowledge of French or German is desirable. Upper division requirements: A minimum of 24 upper division units in mathematics to include Mathematics 117 (unless taken as Mathematics 4B in the lower division); 111, 119, 121, and either 105 or 106. Six units of the remaining nine units may be selected from upper division courses in related areas with the approval of the department. A minor is not required, but is recommended.

A *teaching major* is offered in mathematics for the general junior high school credential and for the general secondary credential. For specific information, refer to the outline of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in *mathematics*. The minor consists of 15 to 22 units in mathematics, six units of which must be in courses carrying upper division credit. Courses should be selected in consultation with the departmental representative.

A *teaching minor* is offered in mathematics for the general secondary, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**X. Basic Mathematics** (3) I, II

Fundamentals of mathematics with applications to everyday problems. Required of all students failing the competency examination in mathematics. Not open for credit to students passing this examination. May not be used in the major or minor.

**A. Elementary Algebra** (3) I, II

Fundamentals of algebra. Not open for credit to students who have credit for one year of high school algebra.

* **B. Plane Geometry** (3) I, II

Fundamentals of plane geometry. Not open for credit to students who have credit for one year of high school geometry. May be counted toward general education in mathematics.

**C. Intermediate Algebra** (3) I, II

An extensive review of elementary algebra followed by quadratic equations, simultaneous equations, ratio and proportion, variation, progressions, etc. Prerequisite: Elementary algebra and geometry or Mathematics A-B.

**D. Trigonometry** (3) I, II

Plane trigonometry with special attention to logarithms and those aspects needed in analytic geometry and the calculus. Prerequisite: Mathematics C or its equivalent.

**E. Solid Geometry** (2) II

Properties of lines and planes. Calculation of areas and volumes. Prerequisite: Mathematics C or its equivalent.

*** G. Mathematics for General Education** (3) I, II
Basic concepts of arithmetic, algebra, and geometry with applications. Recommended for students whose scores on the competency examination, while exempting them from Mathematics X, indicate a need for further training in mathematics. A general education course in mathematics. May not be used in the major or minor.

**S. Slide Rule** (1) I, II
Theory and use of the slide rule. Practice in performing the fundamental operations of arithmetic. Some attention is given to more involved computations. Prerequisite: Trigonometry or Mathematics A-B or equivalents.

**1. Algebra and Trigonometry** (3) I, II
Review of algebra and trigonometry. Further study of identities, graphs, solution of algebraic and trigonometric equations, determinants, and mathematical proofs. Prerequisite: Two years of high school algebra and trigonometry.

**3A. Analytic Geometry** (3) I, II
Equations and loci, conic sections, coordinate transformations, Cartesian and polar coordinates, and parametric representation. Prerequisite: Mathematics 1; or trigonometry and passing of qualifying examination. (Qualifying examination will be given during the first week of the semester.)

**3B. First Course in Calculus** (3) I, II
Introduction to differential and integral calculus with applications. Prerequisite: Mathematics 3A, with a grade of C or better.

**4A. Second Course in Calculus** (3) I, II
Differentiation, integration, infinite series, and applications. Prerequisite: Mathematics 3B, with a grade of C or better.

**4B. Third Course in Calculus** (3) I, II
Partial differentiation, successive integration and applications. Prerequisite: Mathematics 4A, with a grade of C or better. (Solid geometry is recommended.) Not open to students with credit for Math. 117.

*** 7A. Mathematical Analysis** (3) I
Designed for students who do not intend to prepare for a professional career in physical science or in engineering. Consideration is given to the processes and applications of algebra and trigonometry. Prerequisite: High school algebra and plane geometry. Students with credit for Mathematics 1 will not receive credit for Mathematics 7A. This course may be counted toward general education in mathematics.

*** 7B. Mathematical Analysis** (3) II
A continuation of Mathematics 7A including the concepts and applications of analytic geometry and an introduction to the calculus. Prerequisite: Mathematics 7A. Students with credit for Mathematics 3B will not receive credit for Mathematics 7B. This course may be counted toward general education in mathematics.

## Upper Division Courses

*** 104. History of Mathematics** (3) II
History of mathematics down to early modern times. This course may be counted toward general education in mathematics.

**105. College Geometry** (3) I
A synthetic treatment of the points and lines associated with triangles and quadrilaterals, similarity, inversion, ruler and compass construction, etc. Highly recommended for all teachers of high school geometry. Prerequisite: Mathematics 3B or 7B.

**106. Projective Geometry** (3) I
Concurrence of lines, collinearity of points and other properties of figures not altered by projections; construction and study of ellipses, hyperbolas, and parabolas by means of projections. Prerequisites: Mathematics 3B or 7B and permission of instructor.

**111. Theory of Algebraic Equations** (3) I, II
Determinants, complex numbers, and theory of algebraic equations. Prerequisite: Mathematics 3B or 7B.

**112. Analytic Geometry of Space (3) II**
The coordinate systems in space; lines, planes, and quadric surfaces; applications. Prerequisite: Mathematics 4A.

**117. Intermediate Calculus (3) I, II**
Essentially the same as Mathematics 4B. Additional special work for advanced students may be assigned. Prerequisite: Mathematics 4A, with a grade of C or better. Not open for credit to students with credit for Math. 4B.

**118A. Advanced Mathematics for Engineering Students (3) I**
Introduction to differential equations, vector analysis, Fourier series, hyperbolic, elliptic, and Bessel functions. Prerequisite: Mathematics 117 or its equivalent.

**118B. Advanced Mathematics for Engineering Students (3) I**
Introduction to partial differentiation, partial differential equations, line and surface integrals, complex variables, etc. Prerequisite: Mathematics 118A.

**119. Differential Equations (3) I, II**
Ordinary differential equations with applications to geometry, physics, and chemistry. Prerequisite: Mathematics 117 or its equivalent.

**121. Advanced Calculus (3) II**
Review of the fundamental concepts of the calculus, partial differentiation, series, line and surface integrals, etc. Prerequisite: Mathematics 118A or Mathematics 119.

**124. Vector Analysis (3) I**
Vector algebra, differentiation of vectors, gradient, divergence, and curl. Applications to geometry and physics. Prerequisite: Mathematics 4B or 117.

**140A. Mathematical Statistics (3) I**
Graphical and arithmetical characterization of observed frequency distributions, moments, use of normal curve, curve fitting, correlation, etc. Prerequisite: Mathematics 4B or 117.

**140B. Mathematical Statistics (3) II**
Theoretical discrete and continuous distributions, multiple and partial correlation, large and small sample theory including student's T, Chi-square, and the F distributions with applications. Prerequisite: Mathematics 140A.

**166. Honors Course** (Credit to be arranged) I, II Refer to the Honors Program.

**199. Special Study (1-6) I, II**
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**201. Concepts of Geometry From an Advanced Viewpoint (2) I**
An introduction to the fundamental concepts of geometry and the processes of mathematical thinking in this area. Recommended for candidates for the general secondary credential. Prerequisite: One upper division course in geometry.

**202. Concepts of Algebra From an Advanced Viewpoint (2) II**
An introduction to the fundamental concepts of algebra and the processes of mathematical thinking in this area. Recommended for candidates for the general secondary credential. Prerequisite: One upper division course in algebra.

**204. Advanced Work in the History of Mathematics (2) I**
Intensive study of specific phases of the history of mathematics with attention to implications for teaching mathematics. Prerequisite: Mathematics 104.

**224. Functions of a Complex Variable (3) I**
Operations on complex numbers, limits, convergence, continuity, differentiation, integration, Cauchy's Theorem, power series, elementary functions, etc. Prerequisite: Mathematics 118A or 119 and consent of the instructor.

**290. Bibliography (1) I, II**
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

**299. Thesis or Project** (3) I, II
Guidance in the preparation of a project or thesis for the master's degree.

# MUSIC

## IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is offered in *music* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Students majoring in music are not required to complete a minor. Several plans of study are available with varying degrees of emphasis on performance, history and literature, creative activity, and teaching.

The music curricula are designed to fulfill the needs of all students: (1) Those who have professional ambitions in musical performance, or seek a foundation for graduate study leading to college or university teaching, (2) those who are preparing for one of the several state teaching credentials with music as either a major or minor, (3) those whose major professional interest is in another department and are seeking musical study as a minor, and (4) those who are interested in music as an elective study area for the enrichment of their cultural background.

## GENERAL BASIC REQUIREMENTS

General basic requirements for the degree with a major in music to be met by all music students, are as follows: (1) Demonstration of proficiency in vocal or instrumental *performance* at a level of difficulty comparable to the Bach two-part inventions or the easier Haydn sonatas for the piano before admission to the major may be granted; (2) development, through class or individual instruction of *performance ability;* (3) appearance as soloist in at least one student recital during each of the last four semesters; (4) elementary keyboard technique (the student's attention is directed to the prerequisites for certain courses, to the Music 10A-B-C-D requirement and to the credential requirements listed earlier in the bulletin under Professional Curricula in Teacher Education); and (5) as laboratory experience participation in one vocal and one instrumental activity *each* semester excepting the semesters in which the credential candidate is enrolled in cadet teaching (in special cases this requirement may be waived by the chairman of the Music Department). During the semesters of cadet teaching the student is required to enroll in one music activity. A maximum of eight units of credit from music activities may be used toward graduation. The maximum credit permitted toward graduation from any combination of intermediate class, advanced class and individual instruction in solo performance is eight units. Attention is directed to the statement following the course descriptions in which the conditions for receiving credit from private instruction are given.

## SPECIFIC REQUIREMENTS FOR THE MUSIC MAJOR

### (Not the teaching credential)

Music majors must complete the specific requirements listed below and in addition complete the requirements in one of the following fields of emphasis: (1) Performance, (2) Music History and Literature, (3) Creative Activity. Students desiring the Special Secondary Credential in Music should refer to this credential for specific requirements.

Specific requirements for all majors (except for the Special Secondary Credential): Lower division: Music 8A-8B, 10A-B-C-D (may be omitted in part or in full upon evidence of satisfactory piano technique), 51A-51B, 58A-58B, four music activities selected from music courses numbered 70 to 87 (see activity requirement above). Upper division: Music 101A-101B, 108A-108B, 109A, 146A-B-C, four music activities selected from music courses numbered 170 to 187 (see activity requirement above). Eight units in music activity courses may be applied toward general education requirements in Literature, Philosophy, and the Arts.

In addition to completion of the specific requirements listed above, each music major must complete the requirements in one of the following areas of major emphasis:

*Performance:* Add the following courses to the basic requirements: Lower division: Four units selected from Music 11, 16, 21, 26, 31, or 50. Upper division: Four units selected from Music 111, 112, 116, 117, 121, 122, 127, 131, 132, or 150ABCD; four units of electives chosen from Music 109B and/or 199 (special studies in music history and literature or composition). The student emphasizing performance must appear in a joint public recital during the junior year and must present an entire solo public recital during the senior year. The student must pass a preliminary audition of the compositions to be performed at the public recital before the music faculty during the semester preceding the recital appearance.

*Music History and Literature:* Add the following courses to the list of requirements: Upper Division: Four units selected from Music 111, 112, 116, 117, 121, 122, 126, 127, 131, 132 or 150ABCD; six units selected from Music 109B and 199 (special studies in history and literature or composition). During his senior year the student emphasizing history and literature is required to organize, prepare program notes and present two recitals consisting of recorded or "live" performances each of which will deal with representative works of a certain period or composer or with certain periods, composers, works or styles to be compared; such students must pass a preliminary audition of the material to be presented before the music faculty at least one month in advance of each performance.

*Creative Activity:* Add the following courses to the list of requirements: Upper division: Four units selected from Music 111, 112, 116, 117, 121, 122, 126, 127, 131, 132, or 150ABCD; six units selected from Music 109B and 199 (special studies in history and literature or composition). The student emphasizing creative activity is required to present a concert of his compositions during the senior year and present the scores of works to be performed to the music faculty one month in advance of the performance.

Students are required to consult with the chairman of the department for selection of the field of emphasis.

## THE SPECIAL SECONDARY CREDENTIAL IN MUSIC

A *teaching major in music* is offered for the special secondary credential and for the general secondary credential. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *music.* General basic requirements for the minor are as follows: (1) Demonstration of vocal or instrumental performing ability before admission to the minor program may be granted; (2) as laboratory experience participation in one music activity each semester (in special cases this requirement may be waived by the chairman of the department); (3) a maximum of four units received from music activities may be used toward the total graduation requirement. Lower division: 14 to 18 units: Music 8A-8B, 10A-B-C-D (may be omitted in part or in full on evidence of satisfactory piano technique); six units selected from 51A-51B or 58A-58B; two units from courses numbered 70 to 87 (see activity requirements for the minor). Upper division: Six units selected from Music 101A-101B or 108A-108B; two units of music activities from music courses numbered 170 to 187 (see activity requirements for the minor).

## ELECTIVES IN MUSIC

The Music Department offers certain courses which fulfill the needs of students who do not have music as a major or minor subject but who are interested in music as an elective study area for the enrichment of their cultural background. Courses particularly suited to these needs are Aesthetics 2 and 102 and the music courses numbered 70 to 88 and from 170 to 188; such courses are designated as general education courses and may be taken as partial fulfillment of the Literature, Philosophy, and the Arts requirement in general education.

Some students will be musically prepared to elect courses in music which may or may not be included in the general education group. Enrollment by qualified students who wish to elect these courses is encouraged.

## Lower Division Courses

***7A. Musicianship—For General Elementary Teachers** (3) I, II

Elementary music theory and skills including notation, meter, rhythm, scales, intervals, triads, sight singing, ear training, dictation, elementary keyboard facility and other rudiments. State adopted elementary music texts used. A general elementary credential requirement. Closed to music majors or minors. Formerly Music 1A.

**7B. Music Materials for the Elementary School** (3) I, II

Study of all phases of elementary school music: Singing, listening, reading, creative music, instruments, repertoire of songs and records, music projects. Required of all general elementary credential candidates. Prerequisite: Music 7A or consent of instructor.

**8A. Music Fundamentals** (3) I

Preparation for study of music structure. Designed to equip the student to sing, play at the keyboard, write and recognize aurally scales, intervals, triads and basic rhythms. (Note: Students lacking keyboard facility must enroll concurrently for piano study.) For majors and minors.

**8B. Elementary Harmony** (3) I, II

Diatonic usage studied through written exercises, keyboard harmony, analysis, dictation and sight-singing. Prerequisites: Ability to play Bach chorales at the keyboard; Music 8A or equivalent.

***10A-10B. Piano—Elementary Class Instruction** (1-1) I, II

Fundamental playing and reading techniques for the pianoforte. Emphasis upon playing by ear, and the development of interpretative ability. Music majors or minors are required to start these courses on admission unless competence of 10D level is demonstrated. Formerly Music 28ABCD.

**10C-10D. Piano—Elementary Class Instruction** (1-1) I, II

Continuation of Music 10A-10B.

**11ABCD. Piano—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission.

**15A. Voice—Elementary Class Instruction** (1) I, II

A class for beginners in the vocal field taking up the problems of breath control, tone placement, articulation and enunciation. Frequent classroom performance of simple songs. Formerly Music 29AB.

**15B. Class Voice—Continuation First Semester Voice** (1) I, II

Study of more advanced songs with attention being given to interpretation, as well as continued work on tone, articulation and placement. Frequent performance before class required. Prerequisite: Music 15A or equivalent. Formerly Music 29CD.

**16ABCD. Voice—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission.

**20AB. Strings—Elementary Class Instruction** (1-1) I, II

Open to all students but primarily for those whose major instrument is not one of the stringed instruments and who are preparing for a teaching credential in music. Formerly Music 2A.

**21ABCD. Strings—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission. Sections are offered in violin, viola, cello, bass.

**25AB. Woodwinds—Elementary Class Instruction** (1-1) I, II

Open to all students but primarily for those whose major instrument is not one of the woodwind instruments and who are preparing for a teaching credential in music. Formerly Music 3A.

**26ABCD. Woodwinds—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission. Sections are offered in flute, oboe, clarinet, and bassoon.

**30AB. Brass—Elementary Class Instruction** (1-1) I, II

Open to all students but primarily for those whose major instrument is not one of the brass instruments and who are preparing for a teaching credential in music. Formerly Music 6A.

**31ABCD. Brass—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission. Sections are offered in horn, trumpet, trombone, tuba, and baritone.

**35. Percussion—Elementary Class Instruction** (1) I, II

Open to all students but primarily for those who are preparing for a teaching credential in music. Formerly Music 5AB.

**50ABCD. Intermediate Individual Study** (1-1-1-1) I, II

For the teaching credential performance requirement or for the requirements of the major emphasis curricula leading to the A.B. degree with a major in music. See explanation below for conditions under which credit may be given for music study under private instructors.

Piano
Organ
Voice
Flute
Oboe
Clarinet
Saxophone
Bassoon
French Horn
Trumpet
Trombone
Baritone Horn
Tuba
Percussion
Violin
Viola
Cello
Contrabass

**51A-51B. Survey of Music** (2-2) Year, 1

Elements and structure of music, instrumental and vocal timbre. Folk music of various countries and music of representative composers. Lectures, study of scores and recordings. Outside concert attendance required. Designed for music majors and minors only.

**53. Opera Technique** (2) I, II

Training in the interpretation and characterization of light and grand opera. Specific work in coordination of operatic ensemble. Formerly Music 31.

**58A. Intermediate Harmony and Two-part Counterpoint** (3) II

Continuation of Music 8B including simple harmonic alteration. Strict species counterpoint in two parts. Prerequisite: Music 8B.

**58B. Advanced Harmony and Three-part Counterpoint** (3)

Chromatic alteration with emphasis on analysis of 19th century chromatic usage and construction of examples in corresponding idioms. Strict species counterpoint in three parts. Prerequisite: Music 58A.

## ACTIVITY COURSES

The activity courses are designed to afford opportunity for observation of rehearsal techniques and laboratory experience in the study and performance of a wide range of representative literature of various periods.

*** 70A-70B. Chamber Music** (1-1) I, II

Sections for string, woodwind, brass, piano, and mixed ensemble groups. Permission of the instructor required. Formerly Music 30AB.

**70C-70D. Chamber Music** (1-1) I, II

Continuation of Music 70A-70B.

**72A. Beginning Instrumental Ensemble** (½) I, II

Open to all instrumental students. Group performance of simple orchestral and band scores. Prerequisite: Music 20A, 25A, 30A, or equivalents, one or more. Formerly Music 24A.

**72B. Intermediate Instrumental Ensemble** (½) I, II
Group performance of orchestral and band scores of more advanced grade. Materials covered will prepare the student for minor parts in either the symphony orchestra or the symphony band. Prerequisites: Music 72A or equivalent. Formerly Music 24B.

***75ABCD. Symphony and Marching Band** (2-2-2-2) I, II
Permission of the instructor required. Formerly Music 26ABCD.

***80ABCD. Symphony Orchestra** (1-1-1-1) I, II
Permission of the instructor required. Formerly Music 13ABCD.

***85ABCD. Chorus** (1-1-1-1) I, II
Permission of the instructor required. Formerly Music 15ABCD.

***86ABCD. Treble Clef** (1-1-1-1) I, II
Permission of the instructor required. Formerly Music 10ABCD.

***87ABCD. Men's Glee Club** (1-1-1-1) I, II
Permission of the instructor required. Formerly Music 12ABCD.

***88ABCD. Workshop Chorus** (½-½-½-½) I, II
Open to students who do not have music as a major or minor field and who are interested in singing standard choral works. No entrance examination required. Designed for nonmusic majors and minors. Formerly Music 20ABCD.

## Upper Division Courses

(For description of courses in the field of music appreciation, see Aesthetics)

**101A-101B. History of Music** (3-3) Year, 1
Detailed study of chronological development of musical art and forms from the age of Bach to the present. Analytical score study and assigned recordings. Familiarity with musicological resources through individual assignments. Prerequisite: Music 51A-51B. Music majors and minors only.

**106A. Counterpoint** (2) I
Study of the five species of counterpoint with much practice in writing in such forms. Application of contrapuntal style to modern composition. Prerequisite: Music 4B. To be discontinued after 1952-53.

**106B. Counterpoint** (2) II
Species counterpoint in four parts. Analysis of contrapuntal usage in musical composition. Continuation of Music 106A. Prerequisite: Music 106A. To be discontinued after 1952-53.

**108A. Twentieth Century Harmonic Practice and Four-part Counterpoint** (3) I
Study of harmonic usages and trends since Debussy. Strict species counterpoint in four parts. Prerequisite: Music 58B.

**108B. Strict Composition** (3) II
Problems of composition in the shorter forms. Prerequisite: Music 108A.

**109A-109B. Instrumentation and Arranging** (2-2) Year, 1
Arranging of music for full orchestra. Selected works of students to be performed by standard orchestras. Prerequisites: Music 58B or 4B; 109A for 109B. Formerly Music 121A-121B.

**111ABCD. Piano—Intermediate Class Instruction** (1-1-1-1) I, II
Materials and techniques of intermediate level are studies in detail. Satisfactory audition before the instructor is required for admission.

**112ABCD. Piano—Advanced Class Instruction** (1-1-1-1) I, II
Materials and techniques of the advanced level are studied in detail. Satisfactory audition before the instructor required for admission.

**116ABCD. Voice—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission.

**117ABCD. Voice—Advanced Voice Instruction** (1-1-1-1) I, II

Materials and techniques of advanced level are studied in detail. Satisfactory audition before the instructor is required for admission.

**121ABCD. Strings—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission. Sections are offered in violin, viola, cello, and bass.

**122ABCD. Strings—Advanced Class Instruction** (1-1-1-1) I, II

Repertoire includes study of standard orchestral parts, solos, sonatas, suites and concerti. Satisfactory auditions before the instructor are required for admission. Sections are offered in violin, viola, cello, and bass.

**126ABCD. Woodwinds—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission. Sections are offered in flute, oboe, clarinet, and bassoon.

**127ABCD. Woodwinds—Advanced Class Instruction** (1-1-1-1) I, II

Repertoire includes study of standard orchestral parts, solos, sonatas, suites and concerti. Satisfactory auditions before the instructor are required for admission. Sections are offered in flute, oboe, clarinet, and bassoon.

**131ABCD. Brass—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission. Sections are offered in horn, trumpet, trombone, tuba, and baritone.

**132ABCD. Brass—Advanced Class Instruction** (1-1-1-1) I, II

Repertoire includes study of standard orchestral parts, solos, sonatas, suites and concerti. Satisfactory auditions before the instructor are required for admission. Sections are offered in horn, trumpet, trombone, tuba, and baritone.

**141. Methods in Teaching Piano** (3) Summer

Teaching of beginning and intermediate piano. Survey of materials available for child and adult classes. Special consideration of the problems of the adult beginner. Supervised teaching of beginning students in individual lessons and class groups. Formerly Music 128.

**142. Survey of Harmony and Musical Form** (2) (Irregular)

A review of diatonic and chromatic harmony, modulation and musical form. The material covered will serve as refresher study for the Colleague Examination under the California Plan of the Music Teachers Association of California. Not open to music majors or minors. Formerly Music 101.

**146A. Fundamentals of Conducting** (1) I

Elements of baton technique and development of basic skills common to choral and instrumental conducting.

**146B. Instrumental Conducting** (1) II

Study of orchestra and band scores of graduated levels of advancement. The class will prepare and conduct instrumental works in public performances. Prerequisite: Mus. 146. (Formerly Ed. 145B.)

**146C. Choral Conducting** (1) I

Representative literature and techniques for choral organizations will be studied and performed. Practical experience in typical conducting situations will be emphasized in various grade levels. Prerequisite: Mus. 146A. (Formerly Music 120A.)

**150ABCD. Advanced Individual Study** (1-1-1-1) I, II
For the teaching credential performance requirement or for the requirements of the major emphasis curricula leading to the A.B. degree with a major in music. See explanation below for conditions under which credit may be given for music study under private instructors.

Piano
Organ
Voice
Flute
Oboe
Clarinet
Saxophone
Bassoon
French horn
Trumpet
Trombone
Baritone horn
Tuba
Percussion
Violin
Viola
Cello
Contrabass

**153. Opera Technique** (2) I, II
Training in interpretation and characterization of light and grand opera. Specific work in coordination of opera ensemble. Formerly Music 131.

**166. Honors Course** I, II (Credit to be arranged)
To be arranged after consultation with the chairman of the department. Refer to the Honors Program.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of department chairman.

## ACTIVITY COURSES

The activity courses are designed to afford opportunity for observation of rehearsal techniques and laboratory experience in the study and performance of a wide range of representative literature of various periods.

*** 170A-170B. Chamber Music** (1-1) I, II
Sections for string, woodwind, brass and piano ensemble groups. Permission of the instructor required. Formerly Music 130ABCD.

**170C-170D. Chamber Music** (1-1) I, II
Continuation of Music 170A-170B.

**172. Beginning Instrumental Ensemble** (½) I, II
Open to all instrumental students. Group performance of simple orchestral parts and band scores. Prerequisites: Music 20A, 25A, 30A, or equivalents, one or more. Formerly Music 124A.

**172B. Intermediate Instrumental Ensemble** (½) I, II
Group performance of orchestral and band scores of more advanced grade. Materials covered will prepare the student for minor parts in either the symphony orchestra or the symphony band. Prerequisites: Music 72A or equivalent. Formerly Music 124B.

*** 175ABCD. Symphony and Marching Band** (2-2-2-2) I, II
Permission of the instructor required. Formerly Music 126ABCD.

*** 180ABCD. Symphony Orchestra** (1-1-1-1) I, II
Permission of the instructor required. Formerly Music 113ABCD.

*** 185ABCD. Chorus** (1-1-1-1) I, II
Permission of the instructor required. Formerly Music 115ABCD.

*** 186ABCD. Treble Clef** (1-1-1-1) I, II
Permission of the instructor required.

*** 187ABCD. Men's Glee Club** (1-1-1-1)
Permission of the instructor required. Formerly Music 112ABCD.

*** 188ABCD. Workshop Chorus** (½-½-½-½) I, II
Open to students who do not have music as a major or minor field and who are interested in singing standard choral works. No entrance examination required. Closed to music majors and minors. Formerly Music 120ABCD.

### Graduate Courses

**200A-200B. Special Problems in Music** (2-2) Year, I, II
A graduate course in which students may carry out projects in various fields of music under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply for work within a certain field after conference with the music faculty.

**203. Musicology** (2) I, II
Survey of bibliography and methods of research in music history and literature. Emphasis upon interrelationship of musical developments and trends in other arts. Completion of an acceptable thesis in fields of investigation chosen by the student. Prerequisites: Music 101A-101B and permission of the instructor. Advanced courses in Harmony, Composition, and Form and Analysis are desirable.

**206. Composition** (2) I, II
Music composition in the larger forms. Students will be required to submit a complete work in one of the larger musical forms as thesis in the course. Prerequisites: Music 105A-105B, 106A, 107A, 121A and permission of the instructor.

**290. Bibliography** (1) I, II
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis or Project** (3) I, II
Guidance in the preparation of a project or thesis for the master's degree.

### CONDITIONS UNDER WHICH CREDIT MAY BE GIVEN FOR MUSIC STUDY UNDER PRIVATE INSTRUCTORS

Credit may be allowed for private instruction in music under the following conditions:

1. The applicant for such credit must be a regularly enrolled student in the music department of the college.
2. The instructor giving such private work must be approved by the music department. All private work and the names of all such teachers must be registered in the office of the music department chairman at the beginning of the semester.
3. In the case of first semester private study, a placement examination conducted by the music department faculty at the beginning of the semester will show the status of the student at the beginning of his work.
4. Evidence that the standards of the music department have been met will be shown by an examination conducted by the music department faculty at the end of the semester.
5. Ten clock-hours of lessons, and 100 hours of practice per semester are required for one unit of credit.

## PHILOSOPHY

### IN THE DIVISION OF SOCIAL SCIENCES

*Major* work is not offered in philosophy.

### Minor

A *minor in arts and sciences* is offered in philosophy. The minor consists of 15 to 22 units in philosophy, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in philosophy.

### Lower Division Courses

***1A. Introduction to Philosophy** (3) I, II
The place of philosophy in intelligent living. The methods, values, and areas of philosophical inquiry. Through discussion procedures, each student is encouraged to think independently on issues in ethics and religion.

***1B. Introduction to Philosophy** (3) I, II
The nature of philosophical inquiry as applied to problems of knowledge and reality. Through discussion procedures, the student has opportunity and is encouraged to formulate his own tentative conclusions.

***3A-3B. History of Philosophy** (3-3) Year, I
The development of the major concepts of philosophers in the western tradition. Relations of philosophy to science, art, religion, and social and political conditions. 3A covers the ancient and medieval period, 3B the modern. 3A is not prerequisite for 3B.

**20. Logic** (3) I
The use of logic in science and practical life. Analysis of fallacies. Logic and language. Formation and validation of hypotheses. Interpretations of probability. The logic of experimentation.

### Upper Division Courses

***101. Contemporary Philosophy** (3) II
The major philosophical issues, movements, and figures in American and European philosophy of the twentieth century. Prerequisite: 3 units selected from Philosophy 1A, 1B, 3A, or 3B.

**111A-111B. Theory of the State** (3-3) Year, I
The nature of the state, its organization and activities, and its relation to the individual and to other states. Special attention is given to recent developments in the field of political thought. Not open to students with credit for Political Science 111A-111B.

**121. Deductive Logic** (3) II (Offered in 1952-53 and alternate years)
Definition, classification, and division. The forms of reasoning. Analysis of propositions. Immediate inference. The syllogism. Dilemmas. Modern symbolic logic.

***129. Social Ethics** (3) I
Ethical issues of contemporary life. Individualism vs. collectivism; democracy vs. dictatorship; ethical problems arising in law, medicine, business, government, and interpersonal relationships.

**130. Theory of Ethics** (3) II
A study of significant and typical value theories and systems and of the concrete problems such theories seek to explain. The emphasis will be placed on moral values. The student will be encouraged to examine critically his own system of values.

**136. Philosophy of Art** (3) II
The nature of esthetic experience. The principal theories of art, both traditional and contemporary, are studied at length, both in relation to actual artistic production and to the role of art in society.

**137. Philosophy of Science** (3) I (Offered in 1952-53 and alternate years)
A critical examination of the basic concepts and methods underlying contemporary scientific thought. Contributions of the special sciences to a view of the universe as a whole. Prerequisite: 3 lower division units in philosophy.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

# PHYSICAL EDUCATION

## IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

A *major in arts and sciences* is offered in *physical education* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. A minor in a field other than physical education is required.

*Major for Men:* Lower division requirements: Two units of physical education activity courses in general education; Physical Education 53, 63, 64, 72; Zoology 8. Upper division requirements: 26 upper division units to include seven units from physical education courses numbered 141 to 148, inclusive; Physical Education 155, 168, 170A or 170B, 177; and eight units selected from courses in health, physical education, or recreation.

*Major for Women:* Lower division requirements: Four units of physical education activity courses to include Physical Education 1A, 2A-2B, 3A-3B, 4, 5, and 6 (two of these units may be counted as general education); Physical Education 53, 72, and Zoology 8. Upper division requirements: 26 upper division units to include Physical Education 155, 156A-156B, 160, 161, 168, 170A or 170B; and nine units selected from courses in health, physical education, or recreation.

A *teaching major* is offered in *physical education* for the general secondary and special secondary school credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *physical education*. The minor consists of 15 to 22 units in physical education, nine units of which must be in courses carrying upper division credit. The minor should be planned in consultation with the department chairman.

A *teaching minor* is offered in *physical education* for the general secondary, and the special secondary credentials. It may be offered only as a second teaching minor for the general elementary and the kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Required Activities

All lower division students must elect one or more activity course each semester. Two units of activity credit must be offered for graduation, but no more than one activity course in any one semester may be counted toward this requirement. Students carrying fewer than 12 units during any semester may obtain permission from the Dean of Instruction to postpone taking physical education, but may not be exempted therefrom. No permanent excuses from required activity courses will be granted. The college physician, in conjunction with the chairman of the department, will consider stringent cases on an individual basis and make recommendations.

A medical examination is given each student when entering college and recommendation is made as to type of activity most beneficial. Individually adapted physical education classes to care for special needs are offered. The content of the required courses is planned to give each student an opportunity to participate in many activities of carry-over value, developmental nature, and recreational interest. An opportunity is afforded for students to participate in competitive sports and intramural programs.

## MEN'S DEPARTMENT

Freshmen are required to choose from courses numbered 1-10. Sophomores and upper division students may choose from all courses offered. An activity course may be taken for credit once only.

### Lower Division Courses

### ACTIVITY COURSES

All activity courses are general education courses.

**1A-1B-1C-1D. Individual Adaptation** (½) I, II
**2. Basketball** (½) I, II
**3. Boxing** (½) I, II
**4. Gymnastics** (½) I, II
**5. Soccer** (½) I
**6. Softball** (½) II
**7. Touch Football** (½) I
**8. Track and Field** (½) I, II
**9. Volleyball** (½) I, II
**10. Wrestling** (½) I, II
**13. Archery** (½) I, II
**14. Badminton** (½) I, II
**15. Fencing** (½) I, II
**16. Golf** (½) I, II
**17. Handball** (½) I, II
**18. Tennis** (½) I, II
**19. Bowling** (½) I, II
**20A-20B. Swimming** (½) I, II
**23. Sailing** (½) I, II
**24. Hiking** (½) I, II

### INTERCOLLEGIATE SPORTS

**30. Baseball** (½) II
**31. Basketball** (½) I
**32. Cross Country** (½) I
**33. Football** (½) I
**34. Golf** (½) II
**35. Gymnastics** (½) II
**36. Tennis** (½) II
**37. Track** (½) II
**38. Wrestling** (½) II

## WOMEN'S DEPARTMENT

Freshmen may choose from courses numbered 1-11 or 20A-B. Sophomores may choose from all courses offered. An activity course may be taken for credit once only.

The individual activities, tennis, golf, archery, badminton, swimming, and dancing are offered through the year. Candidates for the special secondary credential in physical education must select one as a major activity and two others as minors. Skills in the activities must be maintained as prerequisite to the senior course, Physical Education 185.

### Lower Division

### ACTIVITY COURSES

All activity courses, with the exception of Physical Education 22, are general education courses.

**1A-1B. Fundamental Skills** (½) I, II
Practice in efficient fundamental body movements.

**2A-2B. Folk Dancing** (Men and Women) (½) I, II
2A is a prerequisite for 2B.

**3A-3B. Modern Dance** (Men and Women) (½) I, II
Basic dance movements, analysis of rhythmic elements in movement and their application to the dance. 3A is a prerequisite for 3B.

**4. Fieldball, Soccer, Speedball** (½) I, II

**5. Softball, Volleyball, Hockey** (½) I, II

**6. Basketball** (½) I, II

**11A-11B. Ballroom Dancing** (Men and Women) (½) I, II
11A is a prerequisite for 11B.

**12A-12B. Advanced Modern Dance** (Men and Women) (1-1) Year, I
Advanced techniques and choreography. Criticism of student sketches, studies, and completed dances. Prerequisite: 3A-3B.

**13A-13B. Archery** (½) Year, I, II

**14A-14B. Badminton** (½) Year, I, II

**16A-16B. Golf** (½) I, II

**18A-18B-18C. Tennis** (Beginning, Intermediate, Advanced) (½-½-½) I, II
18A is a prerequisite for 18B; 18B is a prerequisite for 18C.

**19A-19B. Bowling** (½) I, II

**20A. Swimming** (For non-swimmers only) (½) I, II

**20B. Swimming** (Intermediate) (½) I, II

**21. Life Saving** (1) I, II
Standard American Red Cross course in life saving and water safety, designed to qualify superior swimmers for Senior Life Saving Certificate.

**22. Water Safety Instruction** (1) II
Methods and materials for teaching swimming. Course designed to qualify expert swimmers for American Red Cross Swimming Instructors Certificate. Prerequisite: P.E. 20B, or equivalent, and American Red Cross Senior Life Saving Certificate.

**23. Sailing** (½) I, II

**24. Hiking** (½) I, II

## MEN AND WOMEN

## PROFESSIONAL THEORY COURSES

### Lower Division Courses

**53. Physical Education in the Elementary School** (2½) I, II
The State program in physical education for the elementary school forms the basis of the course. Candidates for the Elementary Credential are required to take the course section which includes two lectures and two laboratory periods per week. Candidates for the Special Secondary Credential in physical education may take the course section which includes two lectures without laboratory periods.

**63. Professional Activities (Men)** (2) I
The acquisition of skills and teaching techniques, and the development of knowledge and interest in the combative activities, primarily wrestling and boxing.

**64. Professional Activities (Men)** (2) II
Practice in the skills and techniques of the dance, and experience in the organization and presentation of dance materials.

**72. Introduction to Physical Education** (2) I, II
History and principles of physical education and sports. Study of the objectives of modern physical education with a view toward the development of a basic philosophy and background for professional education.

### Upper Division Courses

**141. Professional Activities: Gymnastics** (Men) (2) I
The skills and teaching techniques in gymnastics. The place of tumbling, apparatus, self-testing and calisthenics in the school program. Knowledge of the rules for competition in gymnastics.

**142. Professional Activities: Swimming** (Men) (1) II
The development of skills in swimming with emphasis on the teaching techniques. Scope of course is from beginning swimming to life saving techniques.

**145. Professional Activities: Team Sports** (Men) (2) I
The skills, rules, teaching techniques, officiating, and organization of materials in such sports as soccer, touch football, softball, hockey, basketball, and other sports.

**146. Professional Activities: Individual Sports** (Men) (2) II
The skills, rules, teaching techniques, officiating, and organization of materials in such sports as handball, tennis, badminton, archery, golf, and other sports.

**147. Professional Activities: Coaching Baseball and Track** (Men) (1-2) II

Organization of practice sessions and drills for developing fundamental skills and special abilities; study of rules and officiating techniques; consideration of scheduling problems, coaching techniques and game strategy.

**148. Professional Activities: Coaching Football and Basketball** (Men) (1-2) I

Organization of practice sessions and drills for developing fundamental skills and special abilities; study of rules and officiating techniques; consideration of scheduling problems, coaching techniques and game strategy.

**151. Instructor's Course in First Aid (2)** I, II

Instructor's course in first aid, as outlined by The American Red Cross. Standard first aid techniques, care of injured, certification and record keeping, and practical work in first aid.

**155. Applied Anatomy and Kinesiology (3)** I

Anatomical and kinesiological analysis of human structure and movement. Application of analysis relative to mechanical principles as influenced by efficiency factors of body functions. Prerequisite: Zoology 8.

**156A-156B. Sports Methods** (Women) **(2-2)** Year, I

Analysis of skills in basketball, hockey, soccer, speedball, volleyball, and softball; methods of presenting sports to large groups; study of rules and officiating. Prerequisites: Physical Education 4, 5, and 6.

**160. Teaching of Body Mechanics** (Women) **(3)** I

Efficient use of the body in daily living; evaluation and classification of exercises, study of methods, and practice in planning and presenting material.

**161. Folk Dancing Materials and Advanced Techniques** (Women) **(2)** I

Folk customs, festivals, and costumes. Selection of dance materials for various age groups. Practice in advanced techniques. Prerequisite: Physical Education 2A.

**162. History and Philosophy of the Dance (2)** I

A study of the historical background of the dance, with special emphasis upon its development, in America and its present status in education and the creative arts. Not open to students with credit for Aesthetics 162.

**164A-164B. Methods in Modern Dance (2-2)** Year, I

Methods in the teaching of modern dance. Selection of materials and course planning for the secondary school. Prerequisite: Physical Education 12A-12B or satisfactory examination in dance skills.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**168. Physiology of Exercise (3)** II

A non-laboratory course emphasizing the relation of physiology to muscular exercise in physical activities. Prerequisites: Physiology 1A and Zoology 8 or equivalent.

**170A-170B. Recreational Leadership (2-2)** Year, I

Principles and practices in recreational leadership. Methods of instruction and special techniques in the activities of the recreation program. Attention to crafts, music, social programs, drama, special projects, dance, sports, campcraft, and outdoor education. Not open to students with credit for Recreation 170A-170B.

**177. Individual Program Adaptation (3)** II

The adaptation of programs for the typical individual, including physical examinations, training and prescribed exercises, follow-up, instructional problems, and evaluation.

**185. Techniques of Individual Sports** (Women) **(1)** I

Review of individual playing techniques, knowledge, rules, and teaching methods in tennis, archery, badminton, and swimming. Designed for senior majors in physical education, who are expected to demonstrate a high degree of competency in the sports indicated.

**190. Administration of Physical Education in the Secondary School** (3) I, II
Problems and practices in the organization and administration of the secondary school activity program. Study, selection and adaptation of activities, examination, and grouping of pupils, use and evaluation of tests. Selection and maintenance of equipment and facilities.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of department chairman.

### Graduate Courses

**200. Evaluation Procedures in Health, Physical Education and Recreation** (2)
A study of tests and measurements in the profession, with practice in their construction and use, and interpretation of results.

**201. Developmental Physical Education** (2) (Alternate years)
Intensive study of postural divergencies, lack of physical development, and methods of correcting such conditions through exercise. Practice in making physical examinations, constructing individual exercise programs, and teaching remedial exercises. Consideration of ethical procedures and limitations. Prerequisite: Physical Education 155.

**203. Problems in Physical Education** (2) (Alternate years)
A survey of current problems facing the Pheysical Education profession, through a review of literature, discussion of trends, and observation of school situations. Analysis and evaluation of actual problems. Written reports required.

**204. Problems in Recreation** (2)
A survey of current problems facing the recreation profession, through a review of literature, discussion of trends, and observation of school situations. Analysis and evaluation of actual problems. Written reports required. Not open to students with credit for Recreation 204.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

## PHYSICAL SCIENCE

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *physical science major in arts and sciences* is offered for the A.B. degree to students who have been admitted to the teacher education program if eight units in professional education courses are completed by the date of degree candidacy. The major is in addition to 45 units in general education, except that nine units of chemistry, physics, and mathematics may be applied toward general education requirements. Lower division requirements: Chemistry 1A-1B, Physics 4A-4B-4C (or 2A-2B-3A-3B), Mathematics 3A-3B, 4A (recommended 4B). Upper division requirements: 24 units to include a minimum of seven units in each of chemistry and physics. Chemistry must include Chemistry 101A. Physics must include Physics 107 and 158 (or 148 if physics preparation is 2A-2B). Recommended: Physical Science 110 and 150. Other courses to be selected with approval of the departmental adviser. Physical Science majors are not required to complete a minor; however, candidates for the general secondary credential may wish to complete a teaching minor for the general secondary credential during the undergraduate program.

A *teaching major in physical science and general science* is offered for the general secondary and general junior high school credentials. For a statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *physical science* for the A.B. degree to students who have been admitted to the teacher education program if eight units in professional education courses have been completed by the date of degree candidacy. The minor consists of a minimum of 20 units to include the following courses: Astronomy 1; Biology 3, 4; Chemistry 2A-2B or 1A-1B; Geology 2 or 1A; Physics 2A-2B and 3A-3B or 4A-4B-4C.

A *teaching minor in physical science and general science* is offered for the general secondary, special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Lower Division Courses

*** 1. Introduction to Physical Science (3) I, II**
A general course presenting the nature of man's physical universe with materials chosen from astronomy and physics. Not open to students who have had a college course in physics or astronomy, or Physical Science 41. This course may be followed by Astronomy 9 for laboratory credit.

*** 2. Introduction to Physical Science (3) I, II**
Emphasis will be upon materials chosen from geology and chemistry to show the origins of natural materials and their use. Not open to students who have had a college course in chemistry or geology. This course may be followed by Geology 3 for laboratory credit.

*** 10. Introduction to Photography (3) I, II**
A consideration of photographic optics and chemistry; nature of light and image formation; photographic emulsions, exposure and development. Composition and lighting. Two lectures and one three-hour laboratory per week. Will not satisfy laboratory requirements in physical science but may be counted toward general education under practical arts.

### Upper Division Courses

**110. Photography for Teachers (3)**
Designed for more mature students to learn photographic skills useful in teaching.

**130. Advanced Photography (3) I**
A consideration of advanced negative control, projection printing techniques, composition and editorial content, architectural and illustrative photography, and flood photoflash techniques. Two lectures and three hours of laboratory per week. Prerequisite: Physical Science 10.

*** 150. Readings in the Physical Sciences (2)**
Reading from selected materials with informal class discussion of topics.

## PHYSICS

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in *physics* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Physics 4A-4B-4C, Chemistry 1A-1B, or their equivalents. Recommended: a reading knowledge of French or German. Upper division requirements: 24 upper division units in physics to include Physics 105A-105B, 107, 110, 158; three units chosen from Physics 102, 160, or 170; two units chosen from Physics 120, 122, or 124; and two units of Physics 199. A minor in mathematics is required, consisting of Mathematics 3A-3B, 4A-4B, or their equivalents, and Mathematics 118A-118B. Recommended: Three units chosen from Mathematics 104, 111, 119, 121, or 124. Nine units of chemistry, physics, and mathematics may be applied toward general education requirements.

A *major in arts and sciences* is offered in *physics* for the B.S. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Physics 4A-4B-4C, Chemistry 1A-1B, Mathematics 3A-3B, and 4A-4B, or their equivalents. Upper division requirements: A minimum of 36 upper division units including Physics 102, 105A-105B, 107, 110, 158; two units of upper division laboratory; two units of Physics 199; and Mathematics 118A-118B. The program, planned in consultation with the departmental adviser for this degree, must be designed to provide a four-year terminal program for the student. A minor is not required. Nine units of chemistry, physics, and mathematics may be applied toward general education requirements.

The following additional courses are required as a part of two options approved under this degree: *Applied Physics*: Physics 106, 112 and four units of Physics 120. Recommended: Physics 114, 160, 170 and Astronomy 107. *Electronics*: Physics 104, 122, 124, 160 and either Physics 152 or Engineering 150. Recommended: Physics 114, 170 and Astronomy 107.

A *teaching major in physical science and general science* is offered for the general secondary school credential and a *teaching major in general science* is offered for the general junior high school credential. For statement of requirements, refer to these credentials.

### Minor

A *minor in physics* is offered in arts and sciences. The minor consists of 15 to 22 units in physics, six units of which must be in courses carrying upper division credit.

A *teaching minor in physical science and general science* is offered for the general secondary, special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Lower Division Courses

NOTE: A maximum of 12 units of lower division physics credit may be applied toward the A.B. or B.S. degrees.

***2A-2B. General Physics** (3-3) Year, I

This course is for liberal arts and certain pre-professional students who do not desire intensive physics preparation. Lectures, demonstrations and discussions. 2A, Properties of Matter, Mechanics and Heat. 2B, Electricity, Magnetism, Sound and Light. Prerequisite: Two years of high school mathematics.

***3A-3B. Physical Measurements** (1-1) Year, I

A laboratory course to accompany Physics 2A-2B. 3A: Properties of Matter, Mechanics and Heat. 3B: Electricity, Magnetism, Sound and Light. One three-hour laboratory per week. Prerequisite for 3A: Concurrent or previous registration in Physics 2A. Prerequisite for 3B: Concurrent or previous registration in Physics 2B.

**4A-4B-4C. Principles of Physics**

The following sequence of three courses is designed to give a thorough background in the fundamental principles of physics, with applications to practical problems. Each course three lectures and one three-hour laboratory per week.

**4A. Mechanics** (4) I, II

The mechanics of solids and fluids. Prerequisites: Credit for Mathematics 3A, or concurrent registration with permission of instructor. Not open to first semester freshmen.

**4B. Electricity** (4) I, II

Magnetism, electricity and elementary electronics. Prerequisite: Physics 4A.

**4C. Heat, Sound and Light** (4) I, II

Heat and elementary thermodynamics, sound and light. Prerequisite: Physics 4B.

**14. Acoustics of Music** (3) II

Fundamentals of acoustics and audition underlying musical phenomena presented in descriptive and nonmathematical terms. Prerequisite: A technical understanding of music.

**22. General Radio** (2) I

Theory of vacuum tubes and their applications to communication, television, and industry. This course may be taken for credit in addition to the maximum 12 units of lower division physics toward the A.B. or B.S. degree.

## Upper Division Courses

**102. Basic Electronics (3) I**

Principles of electron tubes and resistance loaded amplifiers. Negative feedback, and its application to regulated power supplies, cathode followers and direct coupled amplifiers. Prerequsite: Physics 4B.

**104. Communications (3) II**

Power amplifiers, oscillators, modulators and detectors. Radio transmitters and receivers for amplitude modulation and frequency modulation. Television systems. Antennas and radio wave propagation. Prerequisite: Physics 102 or permission of the instructor.

**105A-105B. Analytical Mechanics (3-3) Year, I**

Fundamental principles of Newtonian mechanics by elementary vector methods. 105A: Statics and kinematics of rigid bodies. 105B: Dynamical principles underlying linear and rotary motion of rigid bodies, with additional work in vibration and impact. Prerequisite: Physics 2A-2B or 4A and a working knowledge of calculus.

**106. Optics (3) II**

A study of reflection, refraction, dispersion, interference, diffraction, double refraction and polarization, with applications to optical instruments. Also wave propagation, radiation, spectra and the nature of light. Prerequisite: Physics 2B-3B or 4C.

**107. Electrical Measurements (2) I**

The theory and application of electrical measurements, including the measurements of current, voltage, power, resistance, capacitance and inductance. Stress on determination of probable errors of measurements. An hour lecture and a three-hour laboratory per week. Prerequisite: Physics 2B-3B or 4B and a working knowledge of calculus.

**110. Alternating Current Circuits (3) I**

The operator j applied to circuits containing resistance, capacitance and inductance; series and parallel resonance; coupled circuits; transients; practical circuit elements, networks. Prerequisite: Physics 4B and Mathematics 4A.

**112. Heat and Thermodynamics (3) II**

A study of the thermal properties of matter with an introduction into the kinetic theory of gases and the laws of thermodynamics. Prerequisites: Eight units in physics and a working knowledge of calculus.

**114. Acoustics (3) II**

A study of wave motion and its application to the production, transmission and reception of sound. Material in architectural acoustics, speech and hearing, and acoustical instruments is presented. Prerequisites: Physics 2B-3B or 4C.

**120. Advanced Laboratory (2) I, II**

Advanced experimental measurements in a branch of physics listed below. The course may be repeated for each subject. With the consent of the instructor and adviser, the course may be repeated in the same subject but with new material. Prerequisite: Consent of the instructor.

A. Acoustics
B. Atomic Physics
C. Electricity
D. Heat and Pyrometry
E. Mechanics
F. Optics

**122. Electronics Laboratory (2) I**

An experimental study of electron tubes and their associated circuits. Study of cathode ray oscilloscope, vacuum tube voltmeter, characteristics of power supplies, amplifiers and filter systems. An hour lecture and a three-hour laboratory per week. Prerequisite: Previous or concurrent registration in Physics 102, or permission of instructor.

**124. Radio Measurements (2) II**

Laboratory measurements of the parameters of resonant circuits at radio frequencies. Study of the properties of oscillators, modulators, detectors and wave guides. An hour lecture and a three-hour laboratory per week. Prerequisite: Physics 122 and previous or concurrent registration in Physics 104.

* **148. Introduction to Modern Physics** (3) II

A nonmathematical course covering recent developments in the field of physics, including X-rays, radio-activity, cosmic rays, atomic and nuclear energy. Prerequisite: Upper division standing. Not open to students who have credit for Physics 4A-4B-4C, or equivalent.

**152. Advanced Electronics** (2) I

Theory of vacuum tubes, ultra-high frequency systems and selected topics from contemporary electronics. Prerequisite: Physics 104.

**158. Atomic Particles** (3) I

A study of experimental evidence for the existence and properties of the elemental atomic and nuclear particles. Introduction to the fields of atomic and nuclear physics. Prerequisite: Physics 4A-4B-4C, or equivalent.

**160. Circuit Analysis** (3) II

A study of filter design, transmission lines, and network analysis. Prerequisite: Physics 110.

**166. Honors Course** (Credit to be arranged) I, II

An individual study arrangement for students admitted to the Honors Program. Enrollment through the department chairman, subject to the approval by the Committee on Honors. Refer to the Honors Program.

**170. Electromagnetic Theory** (3) II

Electrostatics and magnetostatics treated by vector methods; chemical and thermal effects; motion of ions in electric and magnetic fields; magnetic field of a current; electromagnetic induction and radiation. Prerequisites: Physics 110, and a working knowledge of vector analysis and differential equations.

**199. Special Study** (1-2) I, II

Individual study or laboratory work on a special problem in physics selected by the student. Each student will be assigned a member of the staff who will supervise his work. Credit, hours and topics to be arranged in each case. Six units maximum credit.

### Graduate Courses

**200. Seminar** (2-2) I, II

An intensive study of some phase of advanced physics.

A. Mathematical Physics
B. Theoretical Mechanics
C. Kinetic Theory of Gases
D. Advanced Acoustics
E. Advanced Electronics
F. Electromagnetic Radiation
G. Atomic Physics
H. History of Physics
I. Fluid Mechanics
J. Vibration
K. Advanced Electricity

**290. Bibliography** (1)

Exercise in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis in physics for the master's degree.

## PHYSIOLOGY

### IN THE DIVISION OF LIFE SCIENCES

Major or minor work is not offered in physiology. Courses in this field may be used as part of the major in zoology or life sciences, and are recommended as part of the lower division requirements for the major in psychology, and for the physical education credential.

### Lower Division Courses

**1A. Human Physiology (3) II**

A lecture course considering the functions of the human body, and including a brief review of the microscopic and gross anatomy of the structures discussed. Prerequisites: Elementary chemistry and high school or college biology or zoology. Three hours of lecture per week. Credit reduced to 2 units, for students having credit for Zoology 20.

**1C. Human Physiology (2) II**

A study of the human functions through laboratory experiments and demonstrations. Six hours of laboratory per week. Prerequisites: Physiology 1A completed or in progress, or Biology 3 and 4, or Zoology 1A-1B.

### Upper Division Courses

**101. General Physiology (4) II**

Fundamentals of plant and animal functions. Two lectures and two laboratory periods per week. Prerequisites: Biology 3 and 4 or Zoology 1A-1B and Chemistry 1A-1B or Chemistry 2A-2B. Not open to students with credit for Zoology 101.

## POLITICAL SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *political science* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Political Science 1A-1B or 71A-71B. Upper division requirements: 24 units to include (a) three units in Political Science 199 and (b) 21 upper division units in political science distributed among two of the following groups: *Group I: Theory and government*, courses numbered 100-139; *Group II: Administration*, courses numbered 140-149; *Group III: International affairs*, courses numbered 150-179. A minor is required and is to be chosen under the direction of the chairman of the department.

Students majoring in political science are advised to become as familiar as possible with related social science fields. It is recommended that majors should have a reading knowledge of at least one foreign language. For students who expect to enter government service, two programs of study are offered: The Public Administration Curriculum and the Public Personnel Management Curriculum. For a description of these curricula, refer to the section of the bulletin entitled: Professional and Vocational Curricula.

A *teaching major* is not offered in political science; however, courses in political science may be used as part of the *teaching major in social science* for the general secondary and general junior high school credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences in political science* is offered. The minor consists of 15 to 22 units in political science, nine units of which must be in courses carrying upper division credit.

A *minor in arts and sciences in public administration* is also offered. The minor consists of Political Science 71A-71B in the lower division; Political Science 140A-140B and three units from 198 or other political science course in the upper division.

A *teaching minor in social science* is offered for the special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Lower Division Courses

*** 1A. Introduction to Government (3) I, II**

Theories and principles of government, with special attention to the problems created by modern industrialism and population pressures.

*** 1B. Introduction to Government (3) I, II**

A comparative survey of selected foreign governments: Their constitutional principles, political institutions, and governmental problems.

*** 71A-71B. Introduction to American Government and Politics** (3-3) Year, I, II

Semester I: Governmental organization in the United States; the federal system; the organization, powers and functions of the legislative, executive and judicial branches of the government; the relations between federal, state and local units of government.

Semester II: Expansion of governmental functions and the development of means of democratic control; an examination of the increased use of government as an instrument of social control; the history, motivation, methods and control of political parties; nominations, elections and minority groups; pressure politics.

This year course meets the graduation requirement in American history, institutions and ideals, the United States Constitution, and California State and Local Government.

## Upper Division Courses

*** 101. American Institutions** (3) I

The principles of the Constitution of the United States of America, and a survey of the political and social institutions which have developed under the Constitution.

This course meets the graduation requirement in the United States Constitution and state and local government.

*** 105. American Political Thought** (3) II

A survey of the development of American ideas concerning political authority from the period of colonial foundation to the present time.

*** 111A-111B. Theory of the State** (3-3) Year, I

The nature of the state, its organization and activities, and its relation to the individual and to other states. Special attention is given to recent developments in the field of political thought. Not open to students with credit in Philosophy 111A-111B.

**120. Political Parties** (3) I

A critical analysis of the political party as a part of the process of government; party organization and activities; nominating and campaign methods; theories and functions of the party system; party responsibility. Special emphasis will be placed upon the function of the two-party system in American government.

**121. Basic Factors in American Politics** (3) I

An analysis of American political, legal, economic, and social factors in their relation to our political system and the public interest.

**122. Propaganda and Public Opinion** (3) II

A study of the forces which mold the American public mind, the practice of propaganda, a description and analysis of public relations, pressure groups and their effect in American public life. Not open to students with credit for Journalism 132.

**128. Government Report Writing** (2) I

Actual writing problems in government, including surveys, recommendations, studies, analyses, progress reports, annual reports, etc., are discussed and their solutions analyzed. Attention to methods of collecting and organizing data, and practice in effective presentation of facts and ideas. Special consideration is given to problems of class members.

**135. California Law of Municipal Corporations** (2) II

California law governing the nature, regulation and control of the counties, charter cities, sixth class cities, school districts and special districts. The creation, alteration, dissolution, legal actions by and against, powers and duties; rights and liabilities of local governments.

**136. Administrative Law** (2) I

The law of public office and public officers, powers of administrative authorities, scope and limits of administrative powers, remedies against administrative action.

*** 137A-137B. Constitutional Government** (2-2) Year, I
Modern government and politics; its theoretical foundations, institutions and problems. Emphasis will be on American experience with useful comparisons with other countries. Either semester may be taken first. This year course meets the graduation requirement in the United States Constitution and California State and Local Government.

*** 139A-139B. American Constitutional Development** (3-3) Year, I
A study of the work of the Convention of 1787 and of significant phases of American constitutional law. Not open to students with credit for History 172A-172B. This year course meets the graduation requirement in American history, institutions and ideals, United States Constitution, and California State and Local Government.

**140A-140B. Principles of Public Administration** (3-3) Year, I
Semester I: The administration of public services, staff and line functions, theories of organization and practices, and procedures of different types of governmental agencies.

Semester II: Principles and problems in governmental budgeting, performance and capital outlay, budget procedures, organization and administration of personnel programs, controls over administrative behavior, responsible bureaucracy and professionalism in the public services. Not open to students with credit in Political Science 147A-147B.

**142. State Government** (3) II
A study of the political structure and its operation used in the carrying on of the functions exercised by the states; state-federal relations; state-local government relations; particular emphasis on California government. This course meets the graduation requirement in California State and local government. Not open to students with credit for Journalism 142.

**143. Municipal and County Government** (3) I
A study of the organization and its operation used to carry into effect the functions assigned to local governmental units; particular emphasis upon local government in California. This course meets the graduation requirement in California State and local government. Not open to students with credit for Journalism 143.

**144. Introduction to Public Personnel Administration** (2) I
An introduction to the field, giving general coverage of the problems involved in recruitment, placement, supervision, etc., of public employees. Prerequisite: Permission of instructor.

**145. Public Personnel Management** (2) II
An advanced course involving detailed examination of management of personnel in public service. Prerequisite: Permission of instructor.

**146. Wage and Salary Administration** (3) I
Problems of job analysis; major techniques of job evaluation, including ranking, classification, point system, factor comparison; problems of wage and salary administration, incentive pay methods; merit rating plans. Not open to students with credit for Commerce 154.

**147A-147B. Public Administration** (2-2) Year, I
Administrative organization. Relationship between federal, state, and local governments. Budget, personnel, management, and control. Not open to students with credit for Political Science 140A-140B.

**148. The Government of Metropolitan Areas** (2) I
A study of the governmental problems of metropolitanism; overlapping of governments, services, planning and financing. The use of intergovernmental contracts for public service, proper public service areas, and special authorities.

*** 150A-150B. International Relations** (3-3) Year, I
A historical and analytical consideration of the basic factors—historic, geographic, economic, ideologic, and strategic—which underly and condition the modern conflict between the "sovereign state" and the "community of nations." Fall semester: Origins and development through the nineteenth century. Spring semester: Twentieth century experimentation and conflict.

**151SP. The Contemporary World** (1) II

A series of lectures by members of the faculty on selected problems of the current international scene. Reports required of students enrolled for credit.

**152. International Organization** (3) I

A critical analysis of the organization by which the international community seeks to provide for the exercise of legislative, administrative and judicial functions on the international level: Diplomatic and consular corps; conferences; administration through commissions and unions; amicable procedures for settlement of disputes; The League of Nations-United Nations experiment.

**153. Principles of International Law** (3) I

The function of law in the international community. The historical development of the ideas and rules of international law and their place in the modern diplomatic and legal structure.

**154. International Law and the Courts** (3) II

A case study of the application of the rules of international law in national and international courts.

**155. Dynamics of Modern International Crises** (3) I

The determination and analysis of facts surrounding international crises since World War II; the evaluation of these crises and their effects upon external policies of the United States and the operations of the United Nations. Prerequisite: Consent of the instructor.

**158A-158B. American Foreign Policy** (3-3) Year, I

Lectures and reading in the field of American foreign relations since 1776, with special emphasis, in the second semester, upon affairs since 1900. A general survey course. Not open to students with credit for History 176A-176B.

**160. Government of the British Dominions** (3) II

Development of the new British Empire and imperial relations of the self-governing dominions; government of Canada, Australia, New Zealand, and South Africa; conditioning historical, economic and racial factors. Not open to students with credit for History 156B.

**162. Government of England** (3) I

The structure and functioning of English parliamentary system with emphasis upon present day political principles and parties.

**165. Governments of Latin America** (3) II

The governments of leading and representative Latin American states. Emphasis on the background and evolution of current political institutions and philosophies.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**167. Government of the Soviet Union** (3) I

Theory and practice of government in the Soviet Union, with some attention to Russian foreign affairs.

**198. Internship in Public Administration** (3-6) I, II

Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Admission by permission of the instructor.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## Graduate Courses

**200A-200B. Seminar in Government** (2-2) Year, I, II

**290. Bibliography (1)**
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study (1-6) I, II**
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis (3)**
Guidance in the preparation of a project or thesis for the master's degree.

## PSYCHOLOGY

### IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *psychology* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Two plans are provided for the major: One for those students expecting to pursue the study of psychology beyond the A.B. degree; the other for those students who wish to extend their general education in the field of psychology.

Lower division requirements for all majors: Psychology 5 and 6. Recommended selection of courses in related fields: Six units in biology, physiology, and/or zoology; three units in philosophy; and six units in anthropology and/or sociology.

The upper division requirements for each major will be determined by the plan selected by the student, but a minimum of 24 upper division units in psychology is required for a major.

Psychology majors are not required to complete a minor.

A *teaching major:* A major in psychology may be combined with two teaching minors for a general secondary credential. Refer to the outline of requirements for this credential.

### Minor

A *minor in arts and sciences* is offered in psychology. The minor consists of 15 to 22 units in psychology, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in psychology.

### Plan A Major

Plan A is for a nonprofessional major in psychology and is designed to provide the student with a greater understanding of his expanding group relations leading to happy and effective family and community living. The recommended pattern of courses for this program is not designed to facilitate graduate and professional study in psychology.

The upper division requirements for Plan A majors: Psychology 106, 131, 145, and electives to complete the major. It is expected that each student under Plan A will select, with the assistance of his adviser, a pattern of courses in line with his particular objectives in pursuing Plan A. For most students in Plan A, the following courses will be found particularly helpful: Psychology 105A, 107, 122, 132, 150, and 152.

To facilitate the purpose of Plan A the following courses in other departments are recommended as electives: Anthropology 1A-1B; Biology 1 or Zoology 1A-1B; Economics 1A-1B and 102; Health Education 90; Philosophy 1A-1B; Zoology 114 and 165; and courses in home economics.

### Plan B Major

The purpose of Plan B is to facilitate the specific preparation of those students who wish to pursue graduate and professional preparation in Clinical, Industrial and Personnel, and Theoretical-Experimental Psychology. To this end, three separate programs are suggested under Plan B to provide an undergraduate basic preparation for further study in these fields.

Upper division requirements for all Plan B majors: Psychology 104A, 105A, 160A or 160B, and additional courses to complete the major selected from one of the groups listed below. For each of the three patterns of special preparations under Plan B, the following courses are recommended:

*Preclinical:* Psychology 105B, 106, 131, 145, 150, 151, 152, 160A. The following courses are recommended in other departments: Anthropology 1A-1B; Biology 3 and 4, or Physiology 1A and 1C; Philosophy 1A-1B or 3A-3B, 20, and 129; Sociology 135 and 170; Speech Arts 176 or 179A-179B; and Zoology 165. A natural science minor is recommended.

In selecting courses and choosing electives, the student is urged to consult his adviser and the Bulletin on the requirements for special secondary credentials for school psychometrist and for correction of speech defects.

*Pre-Industrial and Personnel:* Psychology 121, 122, 124, 131, 132, 145, 152, 160B. The following courses are recommended in other departments: Business 153 and 154; Economics 1A-1B, 100A, 150, 151, 170 and 185; Philosophy 20; Political Science 144, and 145; Sociology 50, 51; and six units selected from Sociology 135, 170, 180, 190; and Speech Arts 4; a minor in business, economics, political science, or sociology is recommended.

*Theoretical-Experimental:* Psychology 104B, 131, 140, 145, 150, 160A, 160B, and 177. The following courses are recommended in other departments: Chemistry 2A-2B; Foreign Language; Mathematics 1, 3A, and 3B; Philosophy 1A, and 20; Physics 2A-2B, and 3A-3B; Physiology 1A and 1C; Zoology 1A-1B, 100, and 165. A mathematics or natural science minor is recommended.

## The Master of Arts Degree

The Master of Arts degree is offered in the department as part of the fulfillment of requirements for the School Psychologist credential. It is also possible to obtain a Master's degree if one obtains a School Psychometrist credential. Refer to these credentials and to the Master of Arts degree.

## Lower Division Courses

*** 1. General** (3) I, II

An introduction to some of the facts, principles, and concepts which are basic to understanding human behavior.

**2. Psychology Laboratory** (1) I, II

Application of experimental methods to psychological problems. Includes design and execution of experiments. One lecture and three laboratory hours. Prerequisite: Psychology 1.

**5. Principles of Psychology: Basic Organization of Behavior** (3) I, II

The basic sensory, neural and motor mechanisms and their functions in human behavior. Prerequisite: Psychology 1 and sophomore standing.

**6. Principles of Psychology: Learning and Integrated Behavior** (3) I, II

Attending, perceiving, and learning, including social learning, personality development, and conditions of efficient work. Prerequisite: Psychology 1 and sophomore standing.

**11. Applied Psychology** (3) I, II

A survey of the application of the basic principles of psychology to business, education, industry, government, law, medicine and related fields. Prerequisite: Psychology 1.

**12. Mental Hygiene** (3) I, II

An examination and interpretation of the factors which go into the making of the person as he adapts himself to the social world about him. The development of the normal personality. Prerequisite: Psychology 1.

## Upper Division Courses

**104A. Statistical Methods in Psychology** (3) I, II

An introduction to the use of quantitative methods in psychology, with emphasis upon measures of central tendency and variability, graphic methods and percentiles, linear correlation, and the applications of the normal probability curve. Prerequisite: Psychology 1. Not open to students with credit for Economics 140 or Sociology 103.

**104B. Advanced Statistics** (3) II
A further study of quantitative methods in psychology with particular emphasis on methods of correlation, chi-square, and contingency, and an introduction to the analysis of variance. Prerequisites: Mathematics C and Psychology 104A, or permission of instructor.

**105A. Psychological Testing (Group)** (3) I, II
The basic principles of testing. The selection and critical evaluation of group tests of intelligence, personality, aptitude, interest and achievement. Prerequisite: One of the following courses: Psychology 5, 11; Education 102A, 102D. Not open for credit to students with credit for Education 105A.

**105B. Psychological Testing (Individual)** (3) II
The principles of individual testing. Instruction and practice in the administration of the Stanford-Binet, Wechsler-Bellevue, similar tests. Prerequisite: Psychology 105A and permission of instructor.

*** 106. Developmental Psychology** (3) I, II
A study of the psychological development of the normal individual from conception through childhood, adolescence, maturity, and old age. Stress is laid upon the interdependence of the various periods of the individual's life. Prerequisite: Psychology 1.

**107. Psychology of Later Maturity** (3) II
The psychological, physiological, and sociological factors influencing behavior in the later years of life. Prerequisite: Psychology 1.

**121. Personnel and Industrial Psychology** (3) I, II
Psychological principles applied to problems of selection and assignment of industrial personnel, employee training, and fatigue. Prerequisite: Psychology 104A, or Economics 140, or Sociology 103.

**122. Public Opinion Measurement** (3) II
The history, methods, and problems of public opinion and attitude measurement. Emphasis will be placed upon the polling of consumers and voters. Students will be given field experience. Not open to students with credit for Journalism 122.

**124. Engineering Psychology** (2) II (Not offered in 1952-53)
Psychological problems of man-machine systems. Visual, auditory, and other sensory factors involved in the inter-relations between man and machines. Motion-study, work arrangement, fatigue, and environmental influences in relation to production. Prerequisite: Psychology 1 and upper division standing.

**130. Educational Psychology** (2) I, II
To develop understanding of the applications of psychological research for effective classroom teaching. Observation and field work required. Prerequisite: Psychology 1. Not open to students with credit for Education 130.

**131. Foundations of Personality** (2) I
The human organism in its interaction with the environment and the resultant changes in the development of the personality. Prerequisite: One full year of psychology or equivalent.

**132. Personality Adjustment** (2) II
The application of the fundamental principles of personality to problems of adaptation. Mental hygiene as a local, state, and national problem. Prerequisite: Psychology 131 or permission of instructor.

**140. Physiological Psychology** (3) I, II
The neurophysiological basis of behavior, with particular attention to the psychophysiology of sensory and motor processes, emotion, bodily needs, and learning. Prerequisite: Psychology 5 and 6, or 10 units in biological sciences.

*** 145. Social Psychology** (3) I, II
The major problems and findings concerning group behavior and group membership, the socialization of the individual, and processes of social interaction. Not open to students with credit for Sociology 145.

**150. Abnormal Psychology** (3) I, II

The psychology of behavior disorders, with emphasis on the amentias, neuroses, and psychoses. Prerequisite: One full year of psychology.

**151. Introduction to Clinical Appraisal** (3) I

A study of diagnostic devises in psychology, tests of clinical significance, ratings, interviewing for securing information. Projective and case study analyses; problems of insight, rapport, empathy, and prediction of individual behavior. Prerequisites: One of the following: Psychology 105A, 106, 131, 140, or 150.

**152. Introduction to Methods of Counseling** (3) II

An introduction to problems and methods of counseling and adjustment. The utilization of psychological principles and techniques in dealing with various types of guidance situations. Prerequisite: Enrollment limited to senior and graduate students in psychology or pre-social work.

**160A. Experimental Psychology** (3) I, II

Demonstrations of the principles and conditions of learning, perceiving, problem solving, and thinking. Methodology and design of experiments. Two laboratory sessions and one seminar period per week. Prerequisite: Psychology 5, 6, and 104A.

**160B. Experimental Psychology** (3) I, II

Demonstration of laws governing various sensory experience and motor activities. Experiments in space perception, errors of judgment, and conditions of work and fatigue. Two laboratory sessions and one seminar period per week. Prerequisites: Psychology 5 and 6.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**170. Comparative Psychology** (3) I

A study of the behavior of animals with a view to gaining a better understanding of human behavior. An analysis of the leading experimental work on senory discrimination, learning, and intelligence of each animal group, from amoeba to man. Prerequisites: Psychology 5 and 6.

**175. Theories of Learning** (3) II (Offered 1951-52 and alternate years)

A critical study of the facts, principles, and major theories of learning. Prerequisites: Psychology 1, 5, 6, 104A, and consent of the instructor.

**177. History of Psychology** (3) II

A survey of the historical background of modern psychology. Limited to psychology majors with senior standing.

**191. Practicum in Clinical Psychology** (1-6) I, II

A practicum in mental testing and clinical psychology in various state hospitals, mental hygiene clinics, and similar institutions. Prerequisite: Consent of the instructor.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisites: senior standing and permission of instructor.

## Graduate Courses

**201. Seminar** (2)

A review, integration, and supplementation of the student's knowledge of psychology.

**205. Advanced Mental Testing** (3)

The theory of mental testing and a comprehensive survey of the various verbal and nonverbal individual mental tests.

**211. Advanced Clinical Psychology** (3)

A seminar in psycho-diagnostics, counseling, and clinical research.

**233A. Guidance Counseling Techniques** (3) I, II

Designed for school counselors. To stress the understandings and procedures necessary for effective interviewing. Prerequisite: Education 230, or equivalent. Not open to students with credit for Education 233A.

**234. Projective Psychology** (3) I or II
Introduction to the theory and principles underlying use of projective techniques by clinical psychologists; a review of the structure and dynamics of personality as interpreted by projective devices.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

# RECREATION

## IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

A *curriculum in recreation* is offered in *arts and sciences* for the A.B. degree under the plan for a general major.

Students desiring a concentration in this field should refer to the Recreation Curriculum in the section of the bulletin entitled: Preprofessional and Vocational Curricula.

### Minor

A *minor in arts and sciences* is offered in *recreation*. The minor consists of 15 to 22 units to include the following courses: lower division: two units of physical education activity courses; Physical Education 53; and two units chosen from Art 61B, or fields of dance, drama, or music. Upper division requirements: Recreation 165, 170A-170B, and 184A or 184B. Recommended: Physical Education 151. Consultation with the chairman of the department is advised.

A *teaching minor in recreation* is offered for the general secondary and special secondary credentials. For statement of requirements, refer to this credential.

### Upper Division Courses

**165. Administration of Community Recreation** (3) II
The principles of organization and promotion of leisure time and recreation activities. Course content covers growth of the recreation movement, administration of areas and facilities, program of activities, features, services, organization and administration problems. A required course for recreation minors.

**170A-170B. Recreational Leadership** (2-2) Year, I
Principles and practices in recreational leadership. Methods of instruction and special techniques in the activities of the recreation program. Attention to crafts, music, social programs, drama, special projects, dance, sports, camp-craft and outdoor education. Courses may be taken separately. Not open to students with credit for Physical Education 170A-170B.

**184A-184B. Field Work in Recreation** (3-3) Year, I
Observation and participation in supervised group activities in the field. Practical experience in the various public and semi-public community recreation agencies.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**204. Problems in Recreation** (2) (Alternate years)
A survey of current problems facing the recreation profession, a review of literature, discussion of trends and observation of school situations together with the analysis and evaluation of actual problems. Written reports are required. Not open to students with credit for Physical Education 204.

# ROMANCE LANGUAGES

## IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *Romance languages* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: French 1, 2, 3, 4, 5, 6, and Spanish 1, 2, 3, 4, 5, 6. Recommended: History 4A-4B or 8A-8B (for those who emphasize Spanish in the upper division). Six units from courses 1, 2, 3, 4 in French or Spanish may be applied toward general education requirements. Upper division requirements: A minimum of 24 upper division units in French and Spanish including French or Spanish 198. At least nine units of upper division courses must be taken in each language. A person majoring in Romance languages must have a minor to be decided upon in consultation with his major adviser.

A *teaching major in Romance languages* is offered for the junior high and general secondary credentials. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is not offered in Romance languages, but minors may be taken in French or Spanish.

### Graduate Courses

**290. Romance Language Bibliography (1)**

Exercises in the use of basic reference books, journals, and specialized bibliographies in the field of the Romance languages. Prerequisite: Nine units of upper division French or Spanish and graduate status.

# SOCIAL SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences in social sciences* is offered for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Six units in each of three of the following fields, the selection to be made on advise of the division adviser: (1) economics, (2) geography, (3) history, (4) political science, and (5) sociology-anthropology. Upper division requirements: A minimum of 30 units selected with the approval of the division adviser, as follows: Six to 15 units in each of three fields, provided that one of these fields be different from the fields selected for lower division work, and a 199 course. Twelve units in social science courses may be applied toward social science requirements in general education. Students majoring in social science are not required to complete a minor.

A *teaching major in social sciences* is offered for the general junior high school and general secondary school credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is not offered in the social sciences.

A *teaching minor in social sciences* is offered for the special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

# SOCIOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences,* is offered in *sociology* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Sociology 50 and 51. Upper division requirements: A minimum of 24 upper division units in sociology, including Sociology 103, 110, 135, 152, 153, and 173 or 174. Students majoring in sociology are not required to complete a minor.

A *teaching major* is not offered in sociology; however, courses in sociology may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in sociology. The minor consists of 15 to 22 units in sociology, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in sociology for the general secondary credential; however, courses in sociology may be used as part of the *social science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

***50. Contemporary Social Problems** (3) I, II
Survey of modern social problems recognizing the sociological factors involved. Emphasis on the scientific method of approach. An evaluation of various causes and solutions of problems. A prerequisite for upper division courses in Sociology. Sophomore standing required. Not open to students who have credit for Social Science 40.

***51. Principles of Sociology** (3) I, II
The development and use of the concepts applied to sociological analysis; the effects of isolation and social contacts, interaction, processes, forces, controls, collective behavior and social progress. A prerequisite for upper division courses in Sociology. Sophomore standing required. Prerequisite: Sociology 50.

### Upper Division Courses

**103. Elementary Social Statistics** (3) I, II
Analysis and presentation of elementary material in the fields of sociology and social work. Tabular and graphic presentation, analysis of frequency distributions, trends, simple correlation, sampling and reliability techniques. Prerequisites: Mathematics A-B and Sociology 50 and 51. Mathematics C or 7A recommended. A prerequisite for most upper division sociology courses. Not open to students who have credit for Economics 140 or Psychology 104A or 104B.

***110. Race Relations** (3) I
A study of the Negro, Oriental, and other minority groups in the United States. A study of mental capacities, education, cultural achievement, family life, delinquency and other social factors of each group. Race prejudice, racial consciousness, theories of racial superiority and inferiority will be considered. Prerequisite: Sociology 50, 51.

**120. Industrial Sociology** (3) II
Analysis of group relationships within economic organizations. Problems of leadership, morale and conflict. Some attention to the sociology of occupations and professions. Prerequisites: Sociology 50, 51.

***135. Marriage and the Family** (3) I, II
Preparation for marriage. Prediction scales for evaluating success or failure in marriage. Parent-child relationships; factors in successful and unsuccessful marriages; higher education and the birth rate; married women in industry and professions; desertion and divorce. Not open to students who have credit for Sociology 45, or Home Economics 135.

*** 145. Social Psychology** (3) I, II

The major problems and findings concerning group behavior and group membership, the socialization of the individual, and processes of social interaction. Not open to students with credit for Psychology 145.

**152. History of Social Thought** (3) I

The origin and development of social theory in Europe and America; consideration of the fields and specialization and research in contemporary American sociology. Prerequisite: Sociology 50, 51.

**153. Modern Social Theory** (3) II

A study of theories basic to modern sociological research, including the viewpoints of European and American thinkers. Prerequisites: Sociology 50, 51, and 152.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**170. Social Disorganization** (3) I

Survey of many alleged abnormal phenomena in society as seen in society today in various forms of individual, family, community and world disorganization, such as crime, prostitution, extreme alcoholism, migratory workers, divorce, revolution and war.

**173. Criminology and Penology** (3) I

The extent and characteristics of crime; consideration of physical, mental, economic, and sociological causes of crime; study of methods of penal discipline, prison labor, parole, and probation; programs of prevention. Prerequisite: Sociology 50, 51.

**174. Juvenile Delinquency** (3) II

The nature and extent of delinquency; the causative factors involved; methods of control and prevention, with special attention to the protective and remedial measures offered by the school, home, Juvenile Court, correctional institutions and camps, probation and parole, and recreational agencies. Prerequisite: Sociology 50, 51, or permission of the instructor.

**180. Population Problems** (3) I

Problems of population increase, migration, shifts in composition of population relative to age, sex, and racial distribution. Population practices and theories. Biological and geographical aspects of population problems. International population movements. Prerequisite: Sociology 50, 51 and 103.

**185. Community Welfare Organization** (3) II

An analysis of the structure and process of community organization for social welfare as well as the functional relationships between public and private welfare agencies. Field work will be required to study some of the social agencies of San Diego. Prerequisite: Sociology 50, 51 and Sociology 103, or permission of instructor.

**187. Urban Sociology** (3) I, II

A study of the structure and function of the modern city; types of neighborhoods; forms of recreation; social forces in a metropolitan area; types of urban personalities and groups; rural-urban conflicts of culture. Practical field studies required. Prerequisite: Sociology 50, 51 and 103.

**190. Fields of Social Work** (3) I, II

A survey of the nature of social work and the various kinds of social work which are found in the modern urban life. The student is familiarized with the various social agencies in the community, their problems and methods of work, by readings and field trips. Volunteer social work in some social agency recommended. Prerequisites: Sociology 50, 51, and 103.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**200A-200B. Seminar** (2-2)

**230. Principles of Social Case Work** (3) I
A study of the principles and practices of social case work; problems of case recording and analysis. Directed field work and case studies. Prerequisites: Sociology 190 or Psychology 152 or Education 233.

**231. Field Work in Social Case Work** (3) II
Supervised practice in local social work agencies. Prerequisite: Sociology 190 and 230.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

## SPANISH

### IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *major in arts and sciences* is offered in *Spanish* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: In the major, Spanish 1, 2, 3, 4, 5, 6; in other foreign languages, French 1, 2, or German 1, 2, or Latin 1, 2. Six units in elementary French, German, or Latin may also be applied toward general education requirements. Recommended: History 4A-4B or 8A-8B. Upper division requirements: A minimum of 24 upper division units, at least 21 units of which must be in Spanish, including Spanish 198. The remaining three units may be selected from Anthropology 151B; Geography 118, 119, 120; History 161, 162; Political Science 165; Spanish 115 or 116; or Comparative Literature 101A, 140A-140B, 152A-152B, 159, in consultation with the Chairman of the Department. A person majoring in Spanish must have a minor to be decided upon in consultation with his major adviser.

A *major in arts and sciences* is offered in *Romance languages*. For specific information, refer to Romance languages in the section on Announcement of Courses.

A *teaching major* is offered in Spanish or Romance languages for the junior high school and general secondary credentials. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *Spanish*. The minor consists of 15 to 22 units in Spanish, six units of which must be in courses carrying upper division credit.

A *teaching minor* is offered in Spanish for the general secondary, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

*** 1. Elementary** (3) I, II
Pronunciation, oral practice, readings on Hispanic culture and civilization, minimum essentials of grammar.

*** 2. Elementary** (3) I, II
Continuation of Spanish 1. Prerequisite: Spanish 1 or one year of high school Spanish.

***3. Intermediate** (3) I, II

Reading in Spanish of cultural material, short stories, novels or plays; oral practice; outside reading with oral and written reports. Prerequisite: Spanish 2 or two years of high school Spanish.

***4. Intermediate** (3) II

Continuation of Spanish 3. Prerequisite: Spanish 3 or three years of high school Spanish.

**5. Intermediate** (2) I, II

A practical application of the fundamental principles of grammar by means of oral and written work based on Spanish texts. Prerequisite: Spanish 2 or two years of high school Spanish.

**6. Intermediate** (2) II

Continuation of Spanish 5. Prerequisite: Spanish 5 or three years of high school Spanish.

**10. Conversation** (2) I

Practice in the spoken language; practical vocabulary; conversation on assigned topics; simple dialogues and plays. Prerequisite: Spanish 2 or two years of high school Spanish.

**11. Conversation** (2) II

Continuation of Spanish 10. Prerequisite: Spanish 10, or Spanish 3, or three years of high school Spanish.

***15. Spanish Civilization** (2) I

The major currents and characteristics of Hispanic life and culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

***16. Spanish Civilization** (2) II

Continuation of Spanish 15 with emphasis on Spanish America. No prerequisite.

**50. Spanish Commercial Correspondence** (3) I

A one-semester intermediate course in Spanish composition, directed along the line of commercial correspondence. A practical course, with translation of business letters, and supplementary reading in Spanish on commercial subjects. Prerequisite: Three years of high school Spanish, or completion of Spanish 3 or 5.

## Upper Division Courses

**101A-101B. Conversation and Composition** (3-3) Year, I (Offered in 1953-54)

Translation into Spanish of moderately difficult English prose passages. Free composition in Spanish. Outside reading of modern Spanish plays, with written reports in Spanish. Oral practice in colloquial Spanish with extensive use of phonograph recordings. Prerequisite: Spanish 4 and 6, or their equivalent, with a grade of C.

**102A-102B. Introduction to Spanish Classics** (3-3) Year, I

Reading from several types of classical literature. Lazarillo de Tormes and other novels of Roguery; selections from Don Quixote, and the Cien Mejores Poesias Castellanas; one drama each from the works of Lope de Vega, Calderon, Alarcon, and Moreto; collateral reading and reports. Prerequisite: Spanish 4 and 6, or their equivalent, with a grade of C.

**104A-104B. Spanish-American Literature** (3-3) Year, I

Reading from representative Spanish-American authors during the colonial revolutionary and modern periods. Lectures, class reading, collateral reading and reports. Prerequisite: Spanish 4 and 6, or their equivalent, with a grade of C.

**105A-105B. Modern Spanish Drama** (3-3) Year, I (Offered in 1953-54)

The development of the drama of Spain from the beginning of the nineteenth century to the present time. Prerequisite: Spanish 4 and 6, or their equivalent, with a grade of C.

**110A-110B. Novel and Short Story in Spain** (3-3) Year, I (offered in 1954-55)
The development of the novel and short story in Spain from 1830 to the present time. Prerequisite: Spanish 4 and 6, or their equivalent, with a grade of C.

***115. Spanish Civilization** (2) I
An advanced course in Hispanic culture of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

***116. Spanish Civilization** (2) II
Continuation of Spanish 115 with emphasis on Spanish America. Prerequisite: sophomore standing.

**150. Spanish Phonetics** (3) II
A theoretical and practical study of Spanish phonetics. A study of vowels, consonants, isolated words, and phonic groups. The principles of versification, and exercises in intonation. Especially recommended for prospective teachers of Spanish. Prerequisites: Spanish 4 and 6, or their equivalent, with a grade of C.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**198. Comprehensive Reading and Survey Course** (3) II
Designed to fill up the gaps in the reading done in courses. Class meeting once a week for guidance, reports, and quizzes. Required of all seniors majoring in Spanish.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**201. Old Spanish** (2) I
A study of the language and literature of Spain from the 12th to the 15th centuries. Prerequisite: Nine units of upper division Spanish and graduate status.

**204. Seminar in Spanish-American Literature** (2) II
Intensive investigation of some phase of Spanish-American literature. A single country, an author, or some special problem will be studied and reported upon. Prerequisite: Nine units of upper division Spanish and graduate status.

**290. Bibliography** (1) See Romance Languages

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)
Master's degree candidates in Spanish are expected to substitute a comprehensive examination for the thesis. In unusual cases a student may write a thesis with the permission of the department.

## SPEECH ARTS

### IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *major in arts and sciences* is offered in *speech arts* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division: Required in general education: Speech Arts 3. Required in the major: a minimum of 13 units of lower division courses in speech arts, specializing in the fields of dramatic art, radio, public speaking, or a guided combination of the three. Upper division requirements: A minimum of 24 upper division units, including Speech Arts 150, with an emphasis of 12 units in one area of concentration (theater, radio, public speaking, or speech pathology). A minor is suggested, but not required.

A *teaching major in speech* is offered for the general secondary and special secondary credentials. For a statement of requirements, refer to these credentials.

## Minor

A *minor in arts and sciences* is offered in *speech arts.* The minor consists of 15 to 22 units in speech arts, nine units of which must be in courses carrying upper division credit.

A *teaching minor in speech arts* is offered for the general secondary, special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

## Lower Division Courses

**1. Voice and Diction** (3) II

Exercises and drills to improve the quality, flexibility and effectiveness of the speaking voice leading to good usage in standard American speech. Preparatory to further courses in public speaking and dramatic art.

**2. Oral Communication Laboratory** (1) I, II

Those who fail the speech test must take this course concurrently with Speech Arts 3. This course provides training in articulation, voice control, vocabulary. Individual laboratory assistance on specific speech problems.

***3. Oral Communication** (2) I, II

Training in fundamental processes of oral expression; method of obtaining and organizing material; outlining principles of attention and delivery; practice in construction and delivery of various forms of speeches.

**4. Extemporaneous Speaking** (3) I, II

Practice in extemporaneous speaking on subjects of current interest, both national and local, with stress laid on the organization and delivery of content material. Forum discussion will provide speakers with the opportunity of assembling facts quickly to meet such questions as any audience situation might demand.

**11A. Fundamentals of Interpretation** (3) I, II

Application of the principles involved in "making words come alive": Response to thought and mood, sensory association, emphasis, climax. Practice selections in poetry and prose.

**11B. Intermediate Interpretation** (3) I, II

Oral reading of various types of material suitable for popular audiences: Stories, humorous sketches, light and sentimental verse. Prerequisite: 11A or 55A.

**20. Remedial Speech** (1) I, II

Corrective laboratory training prescribed on the basis of vocalization tests made on recording machine. Required of education majors who fail to meet speech requirements tests. Private assistance given to stutterers and lispers.

**54. Stage Make-Up** (2) I

Practice in the application of stage make-up including straight and character. Two laboratory periods per week.

**55A. Elementary Acting** (3) I, II

Speech and pantomime applied to the problems of characterization in group scenes. This course is concerned with the discovery and development of talent and the appreciation of the actors' problems for directors and teachers. (32 laboratory hours required.)

**55B. Intermediate Acting** (3) I, II

Continuation of 55A emphasizing more emotional material from longer scenes. Some one-act plays will be produced from this class. (32 laboratory hours required.) Prerequisite: 55A or previous training.

**56A-56B. Dramatic Production** (3-3) Year, I

A general survey of play production planned to present the whole organization of the college and school theater, with emphasis on backstage practice, stagecraft, and elementary lighting. Crews for the departmental productions are organized in this class. Prerequisite: 55A or permission of the instructor is prerequisite for 56B.

**57. Elementary Stage Costume** (3) II

A study of pattern drafting, draping, color harmony and the use of fabrics for stage costuming. Students will receive practical training in the construction of stage costumes. Two lecture-demonstration and recitation hours and one laboratory per week.

**60A-60B. Argumentation and Debate** (3-3) Year, I, II

Obtaining and organizing of evidence and the construction and use of the brief; study and discussion of current issues; the presentation of formal and informal debates. Attention to intramural and intercollegiate debating.

**61A-61B-61C-61D. Intercollegiate Debate** (1-1-1-1) I, II

Students are limited to four units, including lower and upper division courses.

**63A-63B-63C-63D. Verse Choir** (1-1-1-1) I, II

Participation in verse speaking chorus to develop quality, range of tone, and ability in dramatic visualization of poetry. Students are limited to four units, including lower and upper division courses.

**81. Survey of Radio** (3) I, II

A course presenting the background, theory, and fundamentals of radio broadcasting. The subject material includes history of broadcasting; types of radio programs: broadcast operation.

**82. Radio Announcing** (3) I

The fundamentals of radio announcing. Class time will be divided between lecture and laboratory practice of announcing styles. Voice training for radio will be stressed. Prerequisite: Speech Arts 81.

**83. Radio Acting and Directing** (3) II

For students interested in the production of dramatic radio programs. Lecture and laboratory for radio techniques in characterization. The use of sound effects and music cues and bridges will be considered. Emphasis will be on production analysis. Actors for Radio Guild productions will be taken from this class. Prerequisite: Speech Arts 81.

## Upper Division Courses

**108. Advanced Interpretation** (3) I, II

Analysis of techniques of literary composition as guides to oral interpretation. Achievements of the creative artist as they affect the interpretative artist. Prerequisite: 11A or 11B or permission of instructor.

**118A. Play Analysis** (3) I

Deals with the one-act play and its technique. New plays are read and discussed in class during their period of development.

**118B. Playwriting** (3) II

Analyses of long plays. Students engage in creative writing.

**120. Readings in Dramatic Art** (3) II

This course will deal with dramatic materials in which the student will study complete plays for interpretation and characterization without memorization and acting techniques.

**140A-140B. Stage Design** (3-3) Year, I, II

The application of the principles of design, color and perspective to the design of settings for the production of period and modern plays. Students will learn to make sketches and models and paint the scenery for the departmental productions. Prerequisite: 56A-56B or permission of the instructor.

**142A-142B. Summer Theater Workshop** (3 or 6) Summer

A theater laboratory for those who wish to devote their entire time to training and a variety of experiences in the summer theater program including acting, design, stagecraft, lighting, directing, and stage management. Prerequisite: Permission of the instructor.

**145. Stage Lighting** (3) II
For directors, designers and technicians in school and community theaters concerning the principles and practice of light, color, lighting instruments, and control equipment, including the design and planning of lighting of plays. Students will serve as light crews for departmental production.

**150. Phonetics** (3) I, II
Auditory and kinesthetic analysis of the sounds of the English language. Valuable as a corrective course in pronunciation and articulation. Required of speech majors and those seeking the Speech Correction Credential.

**152. History and Design of Costume** (stage) (3) II
A study of costume from Egypt to the present. Emphasis on the use of historical costumes on the stage. Costume designs for one stage production. Drawing and painting experience desirable but not necessary.

**154A-154B. History of the Theater** (3-3) Year, I, II
A study of the theater from primitive times to the present. Special attention will be given to the theater as a mirror of the social and cultural background of the various countries and periods in which it is studied. Carries aesthetics credit. (Speech Arts 154B may be taken without 154A.)

**155. Advanced Acting** (3) I
Problems in characterization: Acting styles of the Elizabethan and Eighteenth Century periods. Prerequisite: 55A-55B or the equivalent.

**156. Advanced Dramatic Production** (3) II
Problems and projects in scenery and lighting in connection with the workshop and major productions of the department.

**159. Stage Direction** (3) I
Planned for prospective directors of plays in schools, colleges and community theaters. Through lectures, discussions, and exercise projects the student will become acquainted with the principles, procedure and methods of stage direction. Each student will be required to direct several short plays during the course.

**160. Stage Direction Laboratory** (1) I, II
This will consist of experience in directing a one-act play before a departmental or public audience. It may be taken with or it may be preceded by 159. Prerequisite or corequisite: 159. May be repeated once for credit.

**161A-161B-161C-161D. Advanced Intercollegiate Debate** (1-1-1-1) I, II
Students are limited to four units, including lower and upper division courses.

**162. Advanced Argumentation** (3) I
Presents a further and more detailed study in the preparation of briefs and the organizing of evidence; opportunity for participation in intramural debates, intercollegiate debate, and community speaking activity. Prerequisite: 2A or 2B.

**163A-163B-163C-163D. Advanced Verse Choir** (1-1-1-1) I, II
Participation in verse speaking chorus to develop quality, range of tone, and ability in dramatic visualization of poetry. Students are limited to four units, including lower and upper division courses.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**176. Problems of Speech Correction and Articulation** (3) II
Analysis and discussion of the major articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. (Minimum of 25 laboratory hours required.) Not open to students with credit for Education 176.

**177. The Teaching of Lip Reading** (2)
History, theory and methods of lip reading. Aids for the classroom teacher; program and materials of instruction for the specialized teacher. Opportunities for practice teaching are offered. Not open to students with credit for Education 177.

**179A-179B. Nervous Speech Disorders** (3-3) Year, I
Clinical survey of newest methods of speech correction with special emphasis given to stuttering. (Minimum of 25 laboratory hours required per semester.) Required course for Special Corrective Credential. Not open to students with credit in Education 179A-179B. (Speech Arts 179A is a prerequisite for 179B.)

**180A-180B. Rehearsal and Performance** (1) I, II
One unit of technical practice followed by one unit of acting. One unit may be repeated, making a total of three units.

**181. Radio Sales and Advertising** (3) I, II
A study of advertising trends in radio advertising; time buying, audience survey, and program types in relation to products to be advertised via radio broadcasting. Includes publicity and promotion of radio programming organization of a radio station; relationship between the business and entertainment factors of radio broadcasting. Open to students with consent of instructor. Not open to students with credit for Business 181.

**182. Advanced Radio Production** (3) II (Offered in 1951-52 and alternate years)
Advanced radio production techniques. Students are responsible for the execution of Radio Guild productions. Projects in program types include the use of sound and music. Material includes production analyses and script editing. Prerequisite: Speech Arts 83.

**183. Radio Continuity and News Writing** (3) II
Correlates news editing and writing with announcing styles. Radio news procedure and organization of a radio news staff; analysis of reportorial and commentary styles. Includes production techniques of "on-the-spot" and multiple point pickup broadcasts. Registration with permission of instructor. Not open to students with credit for Journalism 183.

**184. Radio Writing** (3) II
Includes original half-hour scripts, play or novel adaptations for radio, and the documentary program. Study of pacing and timing, the use of sound and music for bridges and cues, and radio format. Plays written by students are read and discussed during their development; the better plays to be produced by the Radio Guild for broadcast. Open to students with consent of instructor.

**191. Organized Discussion** (3) II
Consideration of the symposium, the panel, the open forum, the business session, and varieties of conference speaking. Emphasis upon organization and presentation. Attention to parliamentary procedure for informal groups. Prerequisite: Speech Arts 60 or equivalent.

**192A-192B. Advanced Public Speaking** (3-3) Year, I, II
Careful attention given to the preparation and delivery of longer speeches, using as models classics in the field of oratory. Prerequisite: 4.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## Graduate Courses

**200. Seminar in History of Oratory** (2) II
An advanced course for those already familiar with the techniques and theories of public speaking and debate. A history of public address from the time of Greece up to the present, organized around the theories of representative orators and their relationships to the social environment.

**221. Articulatory Problems of Speech** (2) I
Analysis and discussion of articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Prerequisite: Speech Arts 150.

**245. Seminar in Technical Practice** (2)

Advanced technical projects in planning school theaters and their mechnical equipment, lighting control and lighting instruments and the design of lighting layouts for elaborate plays will be assigned, executed and discussed.

**259. Seminar in Stage Direction** (2)

An advanced course for those who are ready to direct full-length plays and to consider the problems of handling various styles and types of drama in the great periods of dramatic literature for modern production. For graduates with experience in directing plays.

**260. Seminar in Oral Interpretation** (2)

Aesthetic discipline applied to oral reading of masterpieces of poetry and prose. Analysis of thought and emotional content and aesthetic form, including unity and harmony, variety and contrast, balance and proportion, rhythm.

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

# ZOOLOGY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in *zoology* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: in the major, Zoology 1A-1B; in related fields, Botany 1 or 2A-2B, Chemistry 1A-1B or 2A-2B, Physics 2A-2B, 3A-3B. Upper division requirements: 24 units in zoology to include Zoology 100, 101, 106, 155. A minor is not required. Reading knowledge of a foreign language is recommended.

A *major in arts and sciences* is offered in *zoology* for the B.S. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: in the major, Zoology 1A-1B; in related fields, Botany 1 or 2A-2B, Chemistry 1A-1B or 2A-2B, Physics 2A-2B, 3A-3B, Geology 2, 3, and Mathematics 7A-7B. Upper division requirements: 36 units in zoology or approved related fields to include Zoology 100, 101, 106, 155. A minor is not required. Reading knowledge of a foreign language is recommended.

Nine units in physical science and life science may be applied toward general education requirements in the natural sciences.

A *teaching major* is not offered in zoology; however, courses in zoology may be used as part of the *life science major* for the general secondary credential or as part of the *general science major* for the general junior high school credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in zoology. The minor constists of 15 to 22 units in zoology, six units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in zoology; however, it may be used as part of the *teaching minor in life science* for the general secondary credential, or as part of the *teaching minor in general science* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. General Zoology** (4-4) Year, I, II

An introduction to animal biology. Designed for those who expect to do advanced work. Two lectures and 6 hours of laboratory work each week. Prerequisite for Zoology 1B; Zoology 1A.

**8. Human Anatomy (3) I**

A study of human structure through the use of models, prepared dissections and microscope slides. Prerequisite: High school biology, Biology 3, 1, or Zoology 1A. Two hours of lecture and three hours of laboratory per week. Required of prenursing students. Credit reduced to 2 units if student has credit for Zoology 20.

**20. Human Anatomy and Physiology (3) II**

An elementary course in human anatomy and physiology. Prerequisite: High school biology, or Biology 1 or 3 or Zoology 1A. Lectures three hours per week. Credit reduced to two units if student has credit for Zoology 8 or Physiology 1A.

### Upper Division Courses

**100. Embryology (4) I, II**

The development of vertebrates as illustrated by the frog, chick, and pig. Six hours of laboratory and two hours of lecture and quiz per week. Prerequisite: Zoology 1B, or Biology 3 and consent of instructor.

**101. General Physiology (4) II**

Fundamentals of plant and animal functions. Two lectures and two laboratory periods per week. Prerequisites: Biology 3 and consent of instructor, or Zoology 1A-1B, Chemistry 1A-1B or Chemistry 2A-2B. Not open to students with credit for Physiology 101.

**104. Microtechnique (3) I, II**

Introduction to methods of preparation of tissues for microscopic study. Six hours of laboratory and one hour of lecture per week. Prerequisite: One year college chemistry and Zoology 1A-1B, Botany 2A-2B, or Biology 4 and consent of instructor.

**106. Comparative Anatomy of the Vertebrates (4) I**

Dissection, study and comparison of organ systems of typical vertebrates. Two hours per week of lecture and six hours of laboratory. Prerequisite: Zoology 1B, or Biology 3 and consent of instructor.

**108. Histology (4) I**

A study of the microscopic structures and differentiation of tissues and organs of the vertebrates, especially mammals. One lecture and six hours of laboratory per week. Prerequisites: Zoology 1A-1B; recommended Zoology 100.

**109. Hematology (3) I, II**

Microscopic and chemical examination of blood. One lecture and two laboratory periods per week.

**110. Limnology (4) II**

A biological survey of available fresh waters, followed by a selected problem on the relationship of an organism or group of organisms to the environment. Prerequisites: Zoology 1A-1B and elementary chemistry.

**112. Marine Invertebrates (4) I**

Identification and study of behavior and life histories of invertebrates of the San Diego region. Frequent collecting trips to the beaches required. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor. Two hours of lecture and six hours of laboratory or field work per week.

**113. Ornithology (4) II**

The study and identification of birds, especially those of the Pacific Coast and the San Diego region. One hour of lecture and six hours per week of laboratory, or field excursions, and a field project. Prerequisite: Zoology 1B, or Biology 4 and consent of instructor.

**113F. Field Ornithology (1) I**

A field study of local birds with special emphasis upon the fall migration.

**115. Cold-blooded Vertebrates (3) II**

The classification, natural history and distribution of fishes, amphibians, and reptiles. Practice in the techniques of collection and the use of keys for identification. Frequent field trips. One lecture and two laboratory periods per week. Prerequisites: Zoology 1B, or Biology 4 and consent of instructor.

**118. Mammalogy (3) II**
Lectures on classification, adaptations, and ecological relationships of mammals. Laboratory and frequent field trips to familiarize students with local mammals, taxonomic procedures and field techniques. One lecture and six hours of laboratory per week. Prerequisites: Zoology 1A, or Biology 4 and consent of instructor.

**119. Field Zoology (4) I, Summer**
Designed to give a working knowledge of the animals of Southern California; field trips, lectures and laboratory emphasizing ecology, behavior, observational methods, collecting techniques and taxonomy. Prerequisite: A course in college biological science or permission of instructor.

**121. General Entomology (3) I**
The classification, life history, structure, and physiology of insects. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor. Two hours of lecture and three hours of laboratory per week.

**122. Systematic Entomology (1-2) II**
Classification of insects with especial emphasis on a group of insects of the student's choice. To be taken with or to follow 121. May be repeated for credit but with a total of not more than 3 units. Three to six hours of laboratory work each week.

**125. Economic Entomology (4) II**
Course designed for students of agriculture and horticulture. Emphasis is placed on determination and control of insects affecting plants. Quarantine measures are also studied. Two lectures and two laboratory periods per week. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor.

**126. Medical Entomology (3) I**
The role of insects and other arthropods in transmission and causation of human diseases. Three hours of laboratory and two hours of lecture per week. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor.

**128. Parasitology (4) I**
Study of animal parasites with special reference to those of man. Laboratory including identification of important parasites of man, and collection and preservation of local forms. Two hours of lecture and six hours of laboratory per week. Prerequisite: Zoology 1A-1B, or Biology 4 and consent of instructor.

*** 150. Readings in Biology (2) II**
Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles, ecology, economic zoology, zoogeography, breeding habits, animal behavior. Not open to students who have credit for Botany 150. Prerequisite: Biology 3 or equivalent.

**153. Economic Biology (2) I**
Study of uses of plants and animals to man and their destructive effects. Consideration also given to general methods of control and conservation. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor. Not open to students who have credit for Botany 153.

**155. Genetics (3) II**
Principles of plant and animal genetics, with experiments and demonstrations illustrating the mechanisms of heredity. Two hours of lecture and three hours of laboratory per week. Not open to students with credit for Botany 155. Prerequisites: Zoology 1A-1B, or Botany 2A-2B, or Biology 3 and consent of instructor.

**158. Conservation of Wildlife (3) II**
A survey of plant and animal resources with emphasis on their conservation and intelligent use. Prerequisite: a college course in biology or consent of the instructor. Not open to students with credit for Botany 158.

*** 160. Evolution (2) II**
The development of theories of evolution. Two lectures per week. Prerequisite: Biology 1 or equivalent. Not open to students with credit for Botany 160.

***165. Human Heredity** (2) I
Presentation of selected principles of heredity as related primarily to human inheritance. Designed primarily for nonscience majors. Two lectures per week. Not open to students with credit for Zoology 155 or Botany 155.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisites: 15 units in zoology with a grade of A or B; permission of instructor.

### Graduate Courses

**200. Seminar** (3) I
Especial emphasis will be placed on current concepts in the various fields of biology including problems of migration, distribution, speciation, evolution. Required of all graduate students.

**202. Hydrobiology** (2) II
A course in aquatic ecology with special emphasis on fresh water but with reference to marine biology.

**213. Advanced Studies in Ornithology** (2) I
Lectures and seminar on advanced problems of morphology, distribution, behavior and classification of birds.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

# PROVISIONAL CURRICULUM

This curriculum is for the purpose of assisting provisional students in attaining regular status in a curriculum which leads to the A.B. degree. Students in the provisional program are given close supervision in selection of courses and are placed in classes specially designed to aid in adjustment to the college program.

Reclassification to regular status may be obtained upon the completion of at least 24 units of work of "C" grade with an over-all grade point average of 1.0, or upon recommendation of a reclassification committee. Reclassification must ordinarily take place within the first year of college work. Students who do not so reclassify will be placed on probation. (See Probation and Disqualification.)

The courses in the provisional curriculum are open only to students in provisional status. Provisional students in their first college year must select three courses each semester from the list of subjects in the provisional curriculum. All other courses selected to complete the student's program may be chosen from the regular schedule of courses or from additional courses in the provisional curriculum with the approval of the adviser.

## A SUGGESTED PROGRAM FOR PROVISIONAL STUDENTS

| First Year | *Units* *1st Sem.* | *Units* *2d Sem.* |
|---|---|---|
| Physical education activities | ½ | ½ |
| English 41 and 42 | 3 | 3 |
| Psychology 41 and Sociology 45 | 3 | 3 |
| Social Science 40 and 45 | 3 | 3 |
| Physical Science 41 and Biology 41 | 3 | 3 |
| Speech Arts 3 and Health Education 21 | 2 | 2 |
| Electives | 2 | 2 |
| | 16½ | 16½ |

## COURSES OF INSTRUCTION

### BIOLOGY

***41. Man and His Biological World** (3) I, II

General concepts of biology with emphasis on the biology of man in relation to modern life. Equivalent of Biology 1. Laboratory credit for general education may be obtained by following Biology 40 with Biology 4.

### ENGLISH

**40. English Fundamentals** (3) I, II

Elements of composition. Drill in grammar, usage, vocabulary building, reading skills, theme writing. Equivalent of English A. This course is required of students in the provisional program who fail the English examination. This course is a prerequisite for other English courses. May be counted toward graduation credit but may not be used for the general education requirement.

***41. Freshman Composition** (3) I, II

Composition stressing exposition. Reading from essays and articles. Prerequisites: Passing mark in English A qualifying examination or credit for English 40. Equivalent of English 1.

***42. Freshman Literature** (3) I, II

Literature, mainly contemporary, is read for its ideas, especially in relation to human problems and their solution. Practice in writing is continued. Required of all Provisional students. Prerequisite: English 41. Equivalent of English 2.

## PHYSICAL SCIENCE

***41. Man and His Physical World** (3) I, II

A general education course concerning the nature of the scientific method and selected topics in physical science. Materials will be chosen from physics, chemistry, astronomy, and geology to provide an understanding of the relations of physical science to modern life. Equivalent of Physical Science 1. This course may be followed by Astronomy 9 or Geology 3 for laboratory credit.

## PSYCHOLOGY

***41. Psychology and Life** (3) I, II

An elementary survey of normal adult psychology, descriptive and organizational; the subjective and objective aspects of behavior. Furnishes basis for all other courses in psychology and is prerequisite therefor. Equivalent of Psychology 1.

## SOCIAL SCIENCE

***40. Contemporary Problems** (3) I, II

A survey of political, social and economic forces with background material for understanding human problems. Equivalent of Sociology 50.

***45. American Democracy** (3) II

The democratic concept of self-government, its background and growth, with an emphasis on the American use of democratic principles. Includes a study of democracy in a relative and comparative approach to our modern world and other forms of government. This course meets the graduation requirement in the United States Constitution and in California State and local government.

## SOCIOLOGY

***45. Marriage and Family** (3) I, II

Emphasizes preparation for successful marital adjustment by presenting materials that will help students learn to solve their own courtship, marriage, and family problems. A general education course in social science and also in family life education.

# DIRECTORY

## 1951-1952

(Date after name indicates when appointed to faculty)

HEPNER, WALTER R. (1935)----------President
A.B., M.A., Ed.D., University of Southern California.

ACKLEY, JOHN W. (1947)----------Associate Professor of Speech Arts
A.B., University of Redlands; M.A., and two years of graduate study at the University of Southern California.

ADAMS, EILEEN (Mrs. Bert) (1949)----------Junior Librarian
A.B., Willamette University; B.S. in L.S., University of Denver.

ADAMS, JOHN R. (1928)----------Chairman, Division of Languages and Literature; Professor of English
A.B., A.M., University of Michigan; Ph.D., University of Southern California.

ALCORN, MARVIN D. (1941)----------Associate Professor of Education
A.B., Southwestern College; A.M., Teachers College, Columbia University; Ed.D., University of Southern California.

ALLEN, WILLIAM H. (1950)----------Coordinator of Audio-Visual Services
Assistant Professor of Education
A.B., University of California at Los Angeles; M.A., Claremont Graduate School; Ed.D., University of California at Los Angeles.

AMSDEN, GEORGIA C. (1925)----------Associate Professor of Secretarial Management
Diploma, Gregg College, Chicago; special secretarial training in various colleges.

ANDERSON, GRAYDON K. (1949)----------Assistant Professor of Economics
A.B., Willamette University; two years of graduate study at University of Minnesota and University of Wisconsin.

ANDREWS, JULIA G. (Mrs. F. S.) (1947)----------Assistant Professor of Art
A.B., Northwestern University; M.A., Columbia University; two and one-half years of graduate study at Teachers College, Columbia University.

APPLE, JOE A. (1947)----------Professor of Education
A.B., Southeastern State College; M.A., University of Oklahoma; Ed.D., Teachers College, Columbia University.

ATKINSON, DAVID F. (1949)----Instructor in Accounting and Business Management
A.B., San Jose State College; M.A., Stanford University; graduate study at Redlands University. On military leave, January, 1951.

BACON, GUINIVERE KOTTER (Mrs. George) (1928)
Associate Professor of Education
B.S., Utah Agricultural College; M.A., Stanford University; one year of graduate study.

BAKER, CLIFFORD H., JR. (1937)----------Assistant Professor of Spanish
A.B., San Diego State College; M.A., and four years of graduate study at the University of California.

BALLANTINE, FRANCIS A. (1949)----------Assistant Professor of Education
A.B., Michigan State Normal College; A.M., Ph.D., University of Michigan.

BARNHART, KENNETH EDWIN (1939)----------Professor of Sociology
A.B., Southwestern University; B.D., Southern Methodist University; Ph.D., University of Chicago.

BECK, FOY H. (1951)----------Assistant Professor of Education
B.A., Iowa State Teachers College; M.A., Colorado State College of Education; graduate study at Universities of Iowa and Southern California.

BECKER, CALLIE D. (Mrs. E. J.) (1946)----------Senior Librarian
A.B., Shorter College; A.B. in L.S., Emory University.

BENTON, CARL W. (1948)----------Instructor in Physical Education
B.S., University of California at Los Angeles; M.S., University of Southern California. On Military Leave February, 1951.

BIRCH, AILEEN J. (Mrs. C. E.) (1949)----------Instructor in Education
A.B., San Diego State College; graduate study at Claremont College.

BLOCK, EDWARD A. (1946)------------Associate Professor of English
A.B., M.A., Ph. D., University of California.

BRITTAN, MARTIN R. (1950)------------Instructor in Zoology
A.B., San Jose State College; Ph. D., Stanford University.

BROADBENT, HARRY H. (1949)------------Assistant Professor of Physical Education
A.B., University of Oklahoma; M.S., University of Pennsylvania.

BROOKS, BAYLOR (1931)------------Assistant Professor of Geology
B.A., Stanford University. Two years graduate study at University of Arizona and Stanford University.

BROWN, ELIZABETH McPIKE (Mrs. L. P.) (1926)------------Professor of French
Ph.B., M.A., Ph.D., University of Chicago; one year graduate study at the Sorbonne, Paris, France; Certificat d'Etudes Françaises; Diplôme de l'Association Générale de Phonétique, Paris, France; Officier d'Académie.

BROWN, EUGENE P. (1947)------------Associate Professor of Accounting
B.S., Southeastern Teachers College; B.A.,M.A., University of Oklahoma. Two years graduate study at University of Chicago, University of Southern California and University of Mexico.

BROWN, LESLIE PARKER (1922)------------Professor of Spanish and French
B.A., Yale College; M.A., Harvard University; Ph.D., University of Southern California.

BRUBECK, HOWARD R. (1950)------------Associate Professor of Music
B.A., San Francisco State College; M.A., Mills College.

BRUNER, WILLIAM S. (1948)------------Assistant Professor of English
B.S., University of Virginia; M.A., Claremont College.

BRYDEGAARD, MARGUERITE A. (Mrs. H.) (1936)-Associate Professor of Education
A.B., San Diego State College; M.A. and graduate study at Claremont College.

CADE, C. MARSHALL (1951)------------Lecturer in Engineering
B.S., Michigan Agricultural College; M.A., Michigan State College. Licensed Engineer in Civil Engineering.

* CAMERON, ROY ERNEST (1929)------------Professor of Economics
A.B., Ph.D., University of California.

CAMPBELL, LOIS B. (1947)------------Assistant Professor of Education
A.B., University of California; M.A., Teachers College, Columbia University.

CARLSON, HILDING B. (1948)
Coordinator, Personnel Services; Professor of Psychology
Ph.B., M.S., Ph.D., University of Chicago.

CARLSON, THORSTEN R. (1948)
Principal of Campus Laboratory School; Associate Professor of Education
B.E., St. Cloud State Teachers College; M.A., Ph.D., University of Minnesota.

CAVE, MARY F. (1946)------------Assistant Professor of Physical Education
B.S., University of North Dakota. Graduate study at Bennington College and University of California at Los Angeles.

CHADWICK, LEONARD E. (1949)------------Assistant Professor of Economics
B.S. and two and one-half years graduate study at the University of California.

COMIN, NORITA (1949)------------Acting Assistant Professor of Home Economics
B.S., University of Minnesota.

CORBETT, KATHERINE E. (1921)------------Associate Professor of Education
B.Pd., Michigan State Normal College; B.S., A.M., Teachers College, Columbia University.

CORRIGAN, ROBERT F. (1947)------------Assistant Professor of Speech Arts
A.B., University of Michigan; M.A., University of Iowa.

CROUCH, JAMES ENSIGN (1932)------------Professor of Zoology
B.S., M.S., Cornell University; Ph.D., University of Southern California.

CUNKLE, ELIZABETH C. (Mrs. L.) (1948)------------Junior Librarian
A.B., University of California; B.S. in L.S., Columbia University. Graduate study University of California.

CUNNINGHAM, CORNELIUS C. (1947)------------Professor of Speech Arts
A.B., Beloit College; M.A., Northwestern University; Ph.D., University of Iowa.

DEBRECHT, EUGENE F. (1949)
Coordinator of Extension Services; Assistant Professor of Marketing
A.B., San Francisco State College; M.A., Stanford University. On military leave, April, 1951.

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* On leave Semester II.

DEPUTY, ERBY CHESTER (1931)------------------------Professor of Education
A.B., University of Denver; A.M., Ph.D., Columbia University.

DICKHAUT, FLORENCE LILLIAN SMITH (Mrs. C. A.) (1917)--Professor of English
A.B., Northwestern University; M.A., University of Chicago.

DIRKS, JOHN H. (1947)-------------------------------Assistant Professor of Art
A.B., San Diego State College. Graduate study at University of Southern California.

EAGLE, JOHN E. (1946)------------------------Associate Professor of Mathematics
B.S., Montana State College; M.A., Ed.D., Stanford University.

EARNEST, SUE W. (Mrs. L. E.) (1947)----------Associate Professor of Speech Arts
A.B., San Diego State College; M.A., Ph.D., University of Southern California.

EELLS, KENNETH W. (1949)------------------Associate Professor of Psychology
A.B., George Washington University; M.A., Ph.D., University of Chicago.

EVENSON, PATTEE E. (1949)-----------------------Associate Professor of Music
B.S., University of Minnesota; M.M., University of Michigan; specialized training at Universities of Minnesota, Michigan, Southern California, and Eastman School of Music; private instruction in Paris, London and the United States.

FLYE, RICHARD C. (1950)---------------------------Assistant Professor of Music
B.A., University of Virginia; M.A., and Professional Diploma, Columbia University.

FOX, DOROTHEA B. (1951)-------------------------------------Junior Librarian
B.A., San Diego State College; B.S. in L.S., M.A., University of Southern California; graduate study at University of New Mexico.

FRIEDRICH, KURT (1949)-----------------------Assistant Professor of Education
A.B., Columbia College; M.A., Columbia University; Ed.D., Columbia Teachers College.

GELDREICH, EDWARD W. (1947)---------------Assistant Professor of Psychology
A.B., M.A., University of Cincinnati; Ph.D., University of Chicago.

GENERALES, MINOS D. (1949)-------------Assistant Professor of Political Science
Degree in Law and Political Science, including six years of graduate study at the University of Athens, University of Paris Law School, and Institute of International Studies.

GERMANN, LULA (1926)--------------------------------------Senior Librarian
B.S., State Teachers College, Hays, Kansas.

GIBSON, ERNEST DANA (1947)----------Associate Professor of Business Education
Secretarial and Office Management
B.S., University of Minnesota; M.A., Colorado State College of Education; Ed.D., New York University.

GJERDE, CLAYTON M. (1948)-------------------Assistant Professor of Education
A.B., Augsburg College; M.A., Ph.D., University of Minnesota.

GLEASON, JOHN M. (1930)--------------------Associate Professor of Mathematics
A.B., University of California at Los Angeles; M.A., University of California. Two years graduate study at University of Southern California, University of California at Los Angeles and Claremont Colleges.

GRISIER, DONALD W. (1951)------------------Assistant Professor of Education
B.S., Bowling Green State University; M.A., and two years of graduate study at Teachers College, Columbia University.

GULICK, SIDNEY L., JR. (1945)---------------------------Professor of English
B.A., M.A., Oberlin College; Ph.D., Yale University.

HAMMACK, ISABELLA STEWART (1936)--------Associate Professor of Education
A.B., M.A., and one year graduate study at the University of California.

HARCLEROAD, FRED F., JR. (1946)------------Chairman, Division of Education;
Associate Professor of Education
A.B., M.A., Colorado State College of Education; Ph.D., Stanford University.

HARRINGTON, AWONA B. (1949)--------------------------------Junior Librarian
A.B. and one year graduate study at San Diego State College; M.S. in L.S., University of Southern California.

HARRINGTON, NEIL J. (1948)--------------------------Instructor in Chemistry
B.S., Monmouth College; one year of graduate study at DePaul University and Northwestern University. On military leave, October, 1950.

HARRIS, VINCENT C. (1950)-----------------Assistant Professor of Mathematics
B.A., M.A., Ph.D., Northwestern University.

HARVEY, A. R. (1949)------------------------Assistant Professor of Mathematics
B.S., Bates College; A.M., Ph.D., Harvard University.

HARVEY, DOROTHY R. (Mrs. F. A.) (1924)----------Assistant Professor of Botany
A.B., San Diego State College; M.A., University of Southern California. One year graduate study at University of Southern California and University of Chicago.

HARWOOD, ROBERT DANIEL (1928)----------Chairman, Division of Life Science; Professor of Zoology
B.A., Pomona College; Ph.D., Cornell University.

HASKELL, HARRIET (1940, except 1943-45)---------Assistant Professor of English
A.B., Mills College; M.A., Bryn Mawr College; Ph.D., University of Wisconsin.

HAVER, CLARE L. (Mrs. R.) (1949)----------------------Instructor in Education
A.B., Western Washington College of Education.

HAYNES, GERALDINE K. (Mrs. L.) (1931)---------------------Senior Librarian
A.B., Indiana Central College; B.S. in L.S., University of Illinois.

HOUSEMAN, RICHARD A. (1948)---------------Associate Professor of Education
B.S., Central Michigan College of Education; M.A., Ed.D., Teachers College, Columbia University.

HOUSER, LOWELL (1938)------------------------------Associate Professor of Art
Diploma, Chicago Art Institute. Five years' special study in Mexico, Yucatan, Haiti, and New York City.

HOWARD, FRANCIS J. (1950)------------------------------Instructor in Physics
A.B., University of California at Los Angeles; M.S., University of California (Scripps Institution of Oceanography).

HUGHES, DONALD H. (1950)--------------------Assistant Professor of Education
B.A., Hastings College; M.Ed.; Ph.D., University of Colorado.

HUNTER, JAMES J., JR. (1946)------------Executive Dean; Professor of Education
A.B., Cornell University; M.S., Ph.D., Syracuse University.

ISENSEE, ROBERT W. (1948)--------------------Assistant Professor of Chemistry
A.B., Reed College; M.A., Ph.D., Oregon State College.

JACKSON, EVERETT GEE (1930)-------------------------------Professor of Art
A.B., San Diego State College; M.A., University of Southern California. Three years special study in Mexico.

JACOBSEN, HELEN M. (1946)---------------------------------Senior Librarian
A.B., San Diego State College; B.S. in L.S., University of California.

JOHNSON, FRANK LOUIS (1939)-------------------Associate Professor of English
A.B., M.A., University of Minnesota; Ph.D., University of Wisconsin.

JONES, KENNETH K., JR. (1948)---------------Assistant Professor of Speech Arts
B.S., Northwestern University; M.A., Stanford University.

JOSEPH, LIONEL (1947)-------------------------Associate Professor of Chemistry
B.S., St. Louis University; M.S., Ph.D., Washington University.

JULIAN, JAMES L. (1951)----------Publications Manager; Lecturer in Journalism
B.S., B.A., University of Houston; M.A., University of Texas; graduate study at Universities of Iowa and Miami.

KALBFELL, DAVID C. (1948)----------------------Assistant Professor of Physics
A.B., University of California at Los Angeles; M.A., Ph.D., University of California. Registered Electrical Engineer

KAPLAN, OSCAR J. (1946)---------------------Associate Professor of Psychology
B.A., M.A., University of California at Los Angeles; Ph.D., University of California.

KASCH, FREDERICK W. (1948)----------Assistant Professor of Physical Education
B.S., M.S., University of Illinois; graduate study at New York University and University of Illinois.

KEENEY, JOSEPH SUMNER (1933)-------------------------Professor of English
A.B., Yale University; M.A., Ph.D., University of California.

KENNEDY, CHESTER B. (1937)-------------------Associate Professor of English
A.B., Chico State College; M.A., Ph.D., Stanford University.

KIDWELL, WILLIAM M. (1949)------------Placement Officer; Assistant Professor of Psychology
B.A., M.S., University of Oregon; Ed.D., Stanford University.

KITZINGER, ANGELA M. (1945)----------Associate Professor of Health Education
A.B., Barnard College, Columbia; M.A., Teachers College, Columbia University. Additional work at Central School of Hygiene and Physical Education and at Folk High School, Ollerup, Denmark.

KLAPP, ORRIN E. (1948)------------------------Assistant Professor of Sociology
M.A., Ph.D., University of Chicago.

KOESTER, GEORGE A. (1950)--------------------Assistant Professor of Education
B.S., Midland College; M.A., University of Colorado; Ph.D., University of Minnesota.

LAMDEN, CHARLES W. (1946)----------Dean of Educational Services and Summer Sessions; Professor of Accounting and Business Management
A.B., M.A., University of California at Los Angeles; Ph.D., University of California. Certified Public Accountant.

LAURITSEN, WILLIAM H. (1947)------------------Professor of Health Education
A.B., M.A., University of Nebraska; Ph.D., Ohio State University.

LEBARRON, EVANGELINE O. (Mrs. H. E.) (1946, except 1948-49)
Assistant Professor of Secretarial Management
B.A., B.S., University of Iowa; B.A., Sioux Falls College; one and one-half years graduate study at Claremont Colleges, Universities of Southern California, Minnesota and of Hawaii.

LEIB, JULIUS (1938)-----------------------------------Associate Professor of Music
Three years special study at Leipzig Conservatory.

LEIFFER, DONALD B. (1948)--------------Coordinator of Public Administration; Professor of Political Science
A.B., University of California at Los Angeles; M.A., Ph.D., Harvard University.

LEMME, MAURICE M. (1948)------------------Associate Professor of Mathematics
A.B., Oakland College; M.A., Indiana University; Ph.D., Purdue University.

LEONARD, CHARLES B. (1921)------------------------------Professor of History
A.B., M.A., Ph.D., University of California.

LESLEY, LEWIS B. (1924)-------------------------------------Professor of History
A.B., Stanford University; M.A., Ph.D., University of California.

LINLEY, JAMES M. (1945)-----------------------Assistant Professor of Education
Ph.B., University of Chicago; M.S., Ph.D., University of Southern California.

LOCKMAN, EVELYN (1948)------------Assistant Professor of Physical Education
B.A., Vanderbilt University; M.A., George Peabody College; graduate study at New York University, and University of Wisconsin; three years special study in dance.

LUCE, LAWRENCE W. (1949)----------------Assistant Professor of Industrial Arts
B.S., Illinois Wesleyan University; M.S., Iowa State College.

LUCIO, WILLIAM H. (1939)-----------------Coordinator of Elementary Education
A.B., M.A., Ph.D., University of California. Professor of Education

MADDEN, RICHARD (1939)---Chairman of Graduate Studies; Professor of Education
A.B., Nebraska (Peru) State Teachers College; M. A., Ph.D., Columbia University.

MARCHAND, ERNEST L. (1946)---------------------------Professor of English
A.B., M.A., University of Washington; Ph.D., University of Wisconsin.

McBLAIR, WILLIAM (1948)----------------------Assistant Professor of Zoology
A.B., San Diego State College; two years of graduate work at the University of California.

McCLINTIC, JOSEPH O. (1946)----------------------------Professor of Economics
A.B., Central College; A.M., University of Missouri; Ph.D., University of Wisconsin.

McCOLLOM, IVAN N. (1946)----------------------------Professor of Psychology
A.B., Central Washington College of Education; B.S., M.S., University of Oregon; Ed.D., Colorado State College of Education.

McLONEY, WIRT L. (1949)------------------------Instructor in Physical Science
A.B., Western State College; M.A., Colorado State College of Education.

MENDENHALL, MARY (1939)------------Dean of Women; Professor of Philosophy
B.A., University of Colorado; M.A., University of Southern California; Ph.D., Yale University.

MERRILL, JOHN E. (1946)-------------------------Assistant Professor of History
A.B., Stanford University; A.M., Harvard University. Two years graduate study at Stanford University.

MERZBACHER, CLAUDE FELL (1947)------Assistant Professor of Physical Science
B.S., University of Pennsylvania; M.A., Claremont Graduate School. Certificat d'Etudes Francaises. Licensed Professional Chemical Engineer.

MESSIER, LEONARD N. (1946)---------------------Assistant Professor of French
A.B., San Diego State College; M.A., Ph.D., University of California.

MILNE, DAVID S. (1946)---------Associate Professor of Sociology
A.B., University of California at Los Angeles; M.A., University of Southern California; Ph.D., University of Chicago.

MOE, CHESNEY R. (1931)---------Professor of Physics
A.B., M.A., Stanford University; Ph.D., University of Southern California. Registered Mechanical Engineer. On military leave, April, 1951.

MORGAN, CHARLES (1949)---------Instructor in Engineering
M.E., Stevens Institute of Technology; M.S., University of California. Registered Professional Mechanical Engineer.

MYERS, MABEL A. (1946)---------Associate Professor of Bacteriology
A.B., M.A., Pomona College; Ph.D., Cornell University.

NASATIR, ABRAHAM PHINEAS (1928)---------Professor of History
A.B., M.A., Ph.D., University of California.

* NICHOLS, AMBROSE R., JR (1939)---------Professor of Chemistry
B.S., University of California; Ph.D., University of Wisconsin.

NIEBAUER, RUBY R. (1949)---------Assistant Professor of Education
B.S., M.S., University of Wisconsin.

NORLAND, CALVERT E. (1947)---------Assistant Professor of Zoology
A.B., Pomona College; M.S., University of California. Graduate study at Claremont Colleges.

OLSON, ANDREW C., JR. (1946)---------Assistant Professor of Zoology
A.B., San Diego State College; M. S., University of Idaho; graduate study at Oregon State College.

OSBORN, CLARENCE G. (1928-29 and 1937)---Chairman, Division of Social Sciences; Professor of History and Political Science
A.B., A. M., Ph.D., Stanford University.

PEIFFER, HERBERT C., JR. (1937)---------Dean of Students
Professor of Psychology and Guidance
A.B., University of California at Los Angeles; M.A., Ph.D., Stanford University.

* PEREZ, ROSE MARIE (1948)---------Junior Librarian
A.B., San Diego State College; B.S. in L.S., University of Southern California; M.A., University of Chicago.

PERRY, FAY V. (Mrs. J. M.) (1936)---------Coordinator of Guidance for Provisional Students; Professor of Sociology
A.B., San Diego State College; M.A., Ed.D., University of Southern California.

PETERSON, CHARLES E. (1921)------Dean of Men; Professor of Physical Education
A.B., San Diego State College; M.A., Claremont Colleges.

PFAFF, PAUL LEWIS (1931)---------Associate Professor of Speech Arts
A.B., Stanford University; M.A. and two years graduate study at the University of Southern California.

PHELPS, LOIS HIGGS (Mrs. P.) (1950)---------Junior Librarian
A.B., San Jose State College.

PHILLIPS, GEORGE L. (1947)---------Assistant Professor of English
A.B., Dartmouth College; M.A., Harvard University; Ph.D., Boston University.

PHILLIPS, KENNETH (1950)---------Associate Professor of Industrial Arts
B.S., State College for Teachers (Buffalo); M.A., Ph.D., Ohio State University.

PHILLIPS, WALTER THOMAS (1927)---------Professor of Spanish
A.B., University of Washington; M.A., Stanford University; Ph.D., University of Southern California.

POST, LAUREN CHESTER (1937)---------Professor of Geography
A.B., M.A., Ph.D., University of California.

POVENMIRE, E. KINGSLEY (1946)---------Associate Professor of Speech Arts
B.S., Ohio State University; M.F.A., Yale University.

PRESTON, DUDLEY A. (1948)---------Assistant Professor of Botany
B.S., Washington State College; M.S., Ph.D., University of Minnesota.

PROUTY, HELEN L. (1950)---------Assistant Professor of Education
B.S., University of Nebraska; M.A., Ph.D., University of California.

RAGEN, KATHERINE M. (1947)---------Associate Professor of History
A.B., Penn College; M.A., Bryn Mawr College; Ph.D., University of Wisconsin.

---

* On leave.

RICHARDSON, M. BRUCE (1948)______________Associate Professor of Engineering
A.B., Aeronautical Engineer, Stanford University. Registered Mechanical Engineer.

RICHARDSON, ROBERT W. (1939, except 1942-48)_________Professor of Geography
A.B., Ph.D., University of California.

RIDOUT, LIONEL U. (1946, except 1949-50)__________________Instructor in History
A.B., San Diego State College; M.A., and two years graduate study at the University of California.

ROBERTS, ELLIS E. (1949)___________________________________Instructor in Geology
B.S., Michigan College of Mining and Technology; M.S., California Institute of Technology; Ph.D., Stanford University.

ROBINSON, DUDLEY HUGH (1928)________Chairman, Division of Physical Science;
Professor of Chemistry
B.S., Louisiana State University; M.S., State University of Iowa; Ph.D., University of Southern California. Registered Chemical Engineer.

* ROBINSON, EVELYN L. (1946)__________Assistant Professor of Physical Education
B.S., Mary Washington College of the University of Virginia; M.S., University of Southern California.

ROGERS, SPENCER LEE (1930)________________________Professor of Anthropology
A.B., San Diego State College; M.A., Claremont Colleges; Ph.D., University of Southern California.

ROHFLEISCH, KRAMER J. (1947)___________________________Professor of History
A.B., M.A., Ph.D., University of California.

ROST, NORMAN (1951)_________________________________________Lecturer in Music
B.M., University of Michigan.

ROWE, ROBERT D. (1946)________________________________Professor of Chemistry
A.B., Ph.D., Stanford University.

RUJA, HARRY (1947)____________Assistant Professor of Philosophy and Psychology
A.B., University of California at Los Angeles; M.A., University of Chicago; Ph.D., Princeton University; one year postdoctoral study at the University of California at Los Angeles.

RUOCCO, ILSE H. H. (Mrs. L.) (1934)_________________Associate Professor of Art
B.E., University of California at Los Angeles; M.A., Columbia University.

RYAN, FREDERICK L. (1946)___________________________Professor of Economics
B.S., Tufts College; Ph.D., University of California.

SAMPLES, HOWELL GORDON, JR. (1950)_______________________Junior Librarian
A.B., University of Georgia; B.S. in L.S., George Peabody College for Teachers.

SCANLAN, RALPH J. (1952)________________________________Lecturer in Economics
A.B., M.A., Ph.D., University of California. Deceased May 1, 1952.

SCHALLES, FRANCES IRENE (1950)__________________________Junior Librarian
A.B., San Diego State College. One year graduate study.

SCHRUPP, MANFRED H. (1948)_________________Assistant Professor of Education
B.S., M.Ed., Ph.D., University of Minnesota.

SCHUNERT, JIM R. (1948)___________________Coordinator of Secondary Education;
Associate Professor of Education
B.S., M.A., Ph.D., University of Minnesota.

SCHUTTE, WILLIAM H. (1947)___________Assistant Professor of Physical Education
B.S., University of Idaho; M.S., University of Southern California.

SCHWOB, MARION L. (Mrs. W. E.) (1934)_Associate Professor of Physical Education
B.A., State University of Iowa; M.S., University of Southern California.

SCOTT, FRANK L. (1947)_________________Assistant Professor of Physical Education
A.B., Grinnell College; M. A., University of Michigan; additional study at the University of Michigan.

SCOTT, HELEN M. (1950)___________________________________Instructor in Education
A.B., M.A., Colorado State College of Education.

SELLMAN, HUNTON D. (1946)_________________________Professor of Speech Arts
B.S., Purdue University; M.S., University of Arizona. Three and one-half years graduate study at University of California, University of North Carolina and Yale University.

SHANNON, FLORENCE S. (Mrs. E. L.) (1933)
Assistant Professor of Physical Education
A.B., University of California; M.S., University of Southern California.

---

* On leave.

SHELAR, EUGENE (1949)--------------------------Assistant Professor of Zoology
B.S., State Teachers College at Slippery Rock, Pennsylvania; M.S., Ph.D., Cornell University.

SHIELDS, ALLEN E. (1949)---------------------Assistant Professor of Philosophy
A.B., University of California; M.A., Ph.D., University of Southern California

SHOUSE, CLAUDE F. (1946)----------------------Assistant Professor of English
A.B., Georgetown College; M.A., University of Kentucky; one and one-half years graduate study at University of Pittsburgh and University of Southern California.

SILVERNAIL, CHESTER J. (1949)---------------Assistant Professor of Astronomy
A.B., San Diego State College; M.A., Claremont Graduate School.

SKOLIL, LESTER L. (1951)--------------------------Assistant Professor of Physics
A.B., Doane College; M.A., University of Nebraska; Ph.D., University of California.

* SMART, KEITH L. (1949)------------------------------Instructor in Bacteriology
A.B., M.A., University of California.

SMITH, CHARLES ROBERTS (1933)--------------------Coordinator of Athletics;
Assistant Professor of Physical Education
A.B., San Diego State College; M.S., University of Southern California.

SMITH, CLIFFORD EDWARD (1937)---------------------Professor of Astronomy
A.B., Carleton College; M.A., Swarthmore College; Ph.D., University of California.

SMITH, DEANE FRANKLIN (1939)------------------Associate Professor of Music
B.M., M.M., Northwestern University.

SMITH, LOUIS E., JR. (1946)----------------------Associate Professor of Physics
A.B., San Diego State College; Ph.D., University of Washington.

SORENSON, GEORGE N. (1946)------------------Chairman, Division of Fine Arts;
Associate Professor of Art
A.B., San Diego State College; M.A., University of Southern California; graduate study at University of California and University of Minnesota.

SPANGLER, JOHN A. (1946)-------------------Associate Professor of Chemistry
A.B., Ph.D., West Virginia University.

SPORTSMAN, CHARLES C. (1947)-------Associate Professor of Physical Education
B.S., North Texas State College; M.S., and one year additional study at the University of Southern California.

SPRINGSTON, CHRISTINE (1930)------------------Associate Professor of Music
B.A., B.M., University of Redlands; M.A., University of Washington. Diplomée d'execution, Conservatoire Americain, Fontainebleau, France.

STEINMETZ, HARRY C. (1930)-----------------Associate Professor of Psychology
A.B., University of California; M.A., University of Southern California; Ph.D., Purdue University.

STONE, HAMILTON L. (1947)-----------------Assistant Professor of Engineering
B.S., U. S. Naval Academy. Two and one-half years of graduate study. Registered Mechanical Engineer.

STONE, JOHN PAUL (1930)----------Head Librarian; Professor of Library Science
B.S., Northwest Missouri State Teachers College; B.S., M.S., University of Illinois; Ph.D., University of Chicago.

STORM, ALVENA (Mrs. Eugene) (1926)----------Associate Professor of Geography
A.B., M.A., University of California.

STOUGH, MORROW F. (1950)-------------------Assistant Professor of Education
A.B., Wittenberg College; M.A., University of Pennsylvania; Ph.D., University of California.

STOVALL, HARRIET B. (Mrs. S. L.) (1925)---------------------Senior Librarian
Graduate, Berkshire Athenaeum, Massachusetts.

STRAUB, LURA LYNN (1948)-------Assistant Professor of Secretarial Management
A.B., Jamestown College; M.C.S., Indiana University; graduate study at University of Wyoming and University of Denver.

SUTTON, JOSEPHINE M. (1947)-------------------------------Junior Librarian
A.B., University of Oklahoma.

SWIGGETT, JEAN D. (1946)---------------------------Associate Professor of Art
A.B., San Diego State College; M.F.A., University of Southern California; graduate study at Claremont Colleges.

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* On leave.

TALBOY, RUTH A. (1947)----------------Assistant Professor of Home Economics
B.S., Iowa State College; M.A., Stanford University.

TAYLOR, JAMES W. (1950)------------------------------Instructor in Geography
A.B., Northwestern State College; M.A., Louisiana State University.

TAYLOR, KENNETH M. (1949)--------------------Assistant Professor of Zoology
A.B., M.A., Ph.D., University of California.

TAYLOR, MERREL A. (1946)---------------------Assistant Professor of Zoology
A.B., Indiana University; B.S., M.S., University of Michigan.

TERHUNE, JOHN A. (1946)----------------------------------Lecturer in Physics
B.S., U. S. Naval Academy; M.S., Harvard University.

TERRY, WILLIAM L. (1946)----------Chairman, Division of Health, Recreation, and Physical Education; Lecturer in Physical Education
A.B., Western Kentucky Teachers College; M.S., Indiana University; two years of additional study at University of Kentucky, University of Illinois, and Columbia University.

THEOBALD, JOHN R. (1946)-------------------------------Professor of English
B.A., St. Catherine's College, Oxford University; M.A., Mansfield College, Oxford University; Ph.D., University of Iowa.

TIDWELL, JAMES N. (1947)---------------------------------Professor of English
A.B., Simmons University; M.A., University of Oklahoma; Ph.D., Ohio State University.

TOLLEFSEN, DOROTHY J. (1946)-------Assistant Professor of Physical Education
A.B., M.A., University of California.

TORBERT, FRANCES B. (Mrs. H.) (1937)--------Associate Professor of Marketing
A.B., Stanford University; M.A., University of Southern California; one year graduate study at Stanford University.

TRAIL, MABEL COY (1935)---------------------------------Professor of English
A.B., Parsons College; M.A., State University of Iowa; Ph.D., University of Southern California.

TREAT, WOLCOTT C. (1950)-------------------Assistant Professor of Psychology
A.B., Harvard College; A.M., Harvard University; Ph.D., Stanford University.

TUCKER, GORDON H. (1945)-------------------------------Professor of Zoology
B.S., M.S., University of South Carolina; Ph.D., University of North Carolina.

TURNER, MERLE B. (1950)--------------------Assistant Professor of Psychology
A.B., Willamette University; M.A., Stanford University; Ph.D., University of Colorado.

VOEKS, VIRGINIA W. (1949)-------------------Assistant Professor of Psychology
B.S., M.S., University of Washington; Ph.D., Yale University.

WALBA, HAROLD (1949)--------------------------------Instructor in Chemistry
B.S., Massachusetts State College; Ph.D., University of California.

WALKER, DONALD E. (1949)-----------------------------Instructor in Sociology
A.B., M.Th., University of Southern California; two years graduate study at Stanford University.

WALLING, CURTIS R. (1931)-------------------Associate Professor of Engineering
A.B., E.E., Stanford University; one and one-half years of graduate study at Stanford University and the University of Southern California. Registered Electrical Engineer.

WATENPAUGH, FRANK M. (1935)--------------Associate Professor of Accounting
A.B., Pomona College; M.A., University of Southern California. Two years graduate study at University of Southern California and University of Oregon. Public Accountant.

WATSON, DONALD R. (1939)-----Dean of Instruction; Professor of Physical Science
A.B., B.S., A.M., Ed.D., University of Southern California.

WEBB, CHARLES R., JR. (1949)-------------------Assistant Professor of History
A.B., M.A., University of California; M.A., Ph.D., Harvard University.

WEST, EDNA A. (1948)--------------Assistant Professor of Secretarial Management
B.A., Santa Barbara State College; M.A., Claremont Colleges; graduate study at Claremont Colleges, Columbia University and Oregon State College.

WHITE, ALFRED E. (1946)---------Admissions Officer; Coordinator of Educational Research; Associate Professor of Guidance
A.B., M.A., University of California; Ed.D., Stanford University.

WILCOX, ROBERT F. (1950)---------------Assistant Professor of Political Science
A.B., M.A., Stanford University; M.A., Columbia University; Ph.D., Stanford University.

WIMER, ARTHUR C. (1950)------Lecturer in Journalism
B.Lit., Columbia University; M.A., University of Iowa.

WOLF, ERNEST M. (1947)------Assistant Professor of German and Spanish
Study at the Universities of Berlin, Paris, Muenster, Cambridge and Bonn. Ph.D., University of Bonn.

WRIGHT, WILLIAM H. (1921)------Chairman, Division of Business; Professor of Accounting and Business Management
B.S., M.A., University of California; Ph.D., University of Southern California. Public Accountant.

ZIEGENFUSS, GEORGE (1948)------Assistant Professor of Physical Education
B.A., University of Washington; M.A., Ed.D., Teachers College, Columbia University.

## ASSISTANT INSTRUCTORS

BURKHARDT, FREDERIC S.------Assistant in Education
A.B., Dartmouth College.

WILLIAMS, CURTIS E.------Assistant in Bacteriology
A.B., San Diego State College.

## LECTURERS

BACK, GILBERT (1950)------Lecturer in Music
Professional musician.

BARNARD, MARY J. (1952)------Lecturer in Education
San Diego City Schools.

BLAKE, DEAN (1927)------Lecturer in Meteorology
Meteorologist, U. S. Weather Bureau.

BROWN, T. MALCOLM (1952)------Lecturer in Education
San Diego City Schools.

BRUNS, STANFORD (1951)------Lecturer in Accounting
Public Accountant.

BURDICK, HUNTINGTON (1951)------Lecturer in Music
Professional musician.

DE JULIEN, LORENZ F. (1949)------Lecturer in Marketing
Self employed.

GELCHER, JOSEPH (1946)------Lecturer in Insurance
Insurance underwriter.

GOODWIN, JOHN H. (1947)------Lecturer in Insurance
Insurance broker.

HAWKINS, GEORGE L. (1952)------Lecturer in Marketing
Barnes Chase Co.

HUFF, GEORGE D., M.D. (1939)------Lecturer in Health and Hygiene
Practicing physician.

LINDSLEY, BYRON F. (1947)------Lecturer in Commercial Law
Attorney at Law.

LLOYD, STANLEY J., M.D. (1950)------Lecturer in Bacteriology
Practicing physician.

MULLENIX, CARLOS W. (1950)------Lecturer in Music
Professional musician.

ROOKER, JAMES R. (1952)------Lecturer in Bacteriology
B.S., Clark Memorial College.

STANIFORTH, ROBERT O. (1948)------Lecturer in Commercial Law
Swing & Scharnikow, Attorneys.

STORR, SHERMAN (1952)------Lecturer in Music
Professional musician.

SYLVESTER, HELEN K.------Lecturer in Education
Principal, Euclid School. A.B., San Diego State College.

TROGE, RALPH F.------Lecturer in Education
Principal, Woodrow Wilson Junior High School. Ed.D., University of Oregon.

WILSON, JAMES F. (1951)------Lecturer in Education
San Diego City Schools.

## DIVISION OF AIR SCIENCE AND TACTICS

MOSSE, CHARLES E., LT. COL. (1951)-----------Chairman, Division of Air Science and Tactics; Commanding Officer and Professor of Air Science and Tactics
KEHRER, KENNETH, MAJOR (1951)-----------Assistant Professor of Air Science and Tactics
STROMBERGER, HERMAN G., MAJOR (1951)----Assistant Professor of Air Science and Tactics
LEWIS, WILLIAM M., CAPTAIN (1951)----------Assistant Professor of Air Science and Tactics
PUGH, LLOYD R., JR., CAPTAIN (1951)---------Assistant Professor of Air Science and Tactics
DUPONT, FORREST R., 1ST LT. (1951)----------Assistant Professor of Air Science and Tactics
HERTEL, FRITZ S., 1ST LT. (1951)--------------Assistant Professor of Air Science and Tactics
BLACKSTOCK, WILLIAM, JR., M/SGT. (1951)----------Instructor (NCOIC Supply)
BOWMAN, WILLIAM L., S/SGT. (1952)-------------------------------Senior Clerk
HAWBAKER, JAMES O., M/SGT. (1951)-------------------------------Instructor
IVIE, FRANKLIN P., S/SGT. (1951)---------------Instructor (Asst. Supply NCO)
JOHNSTON, VIRGIL A., M/SGT. (1951)-------------Senior Clerk (Instr. in A & L)
SCHOEPFER, EDMUND A., M/SGT. (1951)---------------------------Sgt. Major

## RETIRED FACULTY

(Date following name indicates date of retirement)

HARDY, EDWARD L. (1935)----------------------------------President Emeritus
AULT, JESSE W. (1948)----------------Dean of Education; Professor of Education
BAIRD, OSCAR (1951)----------------------------------------Professor of Physics
BELL, GERTRUDE S. (1938)------------------------------Professor of Psychology
HAMMACK, EDITH CHASTAIN (1950)------------Associate Professor of Education
JOHNSON, MYRTLE (1946)----------------------------------Professor of Biology
KELLEY, GENEVIEVE (1949)----------------------------------Senior Librarian
LIVINGSTON, GEORGE R. (1949)----------------------Professor of Mathematics
MOLITOR, VINNIE CLARK (1938)---------------Associate Professor of Geography
SKILLING, W. T. (1936)-----------------------------------Professor of Astronomy
SMITH, LEILA DEBORAH (1948)-------------------------------Professor of Music
TANNER, JESSIE R. (1936)--------------Associate Professor of Physical Education
WALKER, HILDE KRAMER (1951)------------------Assistant Professor of German

## MEDICAL STAFF *

HAROLD G. CARTER, M.D.------------------------------------------Physician
CARL H. ENGLER, M.D. †------------------------------------------Physician
O. S. HARBAUGH, M.D.--------------------------------------------Physician
DONALD G. LANDALE, M.D.----------------------------------------Physician
ROBERT B. PAPPENFORT, M.D.-----------------------------------Physician
JAMES R. PHALEN, M.D.------------------------------------------Physician
ROBERT T. ROWLAND, M.D.---------------------------------------Physician
FRANCES M. WHITE, M.D.----------------------------------------Physician
IONA C. BARRETT, R.N.---------------------------------------------Nurse
MARILYNN M. FENWICK, P.H.N.--------------------------------------Nurse

## MAINTENANCE STAFF

CAREY D. FOLGER----------------------------Supervisor of Buildings and Grounds
TIMOTHY HALLAHAN, A.B. (Military leave since April 1951) Supervisor of Buildings and Grounds
STEPHEN W. REED------------------------------------------------Head Gardener
WALTER J. SMITH---------------------------------------------------Electrician
KENNETH C. TAYLOR------------------------------------------------Engineer

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* All physicians serving part-time.
† On leave.

## ADMINISTRATIVE OFFICE STAFF

| | |
|---|---|
| Kathleen B. Anderson | Secretary, Social Sciences Division |
| Letha Baldwin | Intermediate Stenographer-Clerk, Library |
| Jane C. Bordner | Secretary, Supervisor of Buildings and Grounds |
| Deon Brokaw | Secretary to Dean of Students |
| Cynthia Chaffee | Junior Stenographer-Clerk, Registrar's Office |
| Gwendolyn Chick, A. B. | Junior Typist-Clerk, Library |
| Diana M. Cordon | Junior Account Clerk, Business Office |
| Evadne Deardorf | Assistant Registrar |
| Gertrude K. Dickinson | Supervising Clerk, Grade 2, Business Office |
| Sue W. Dyke | Mimeograph Office |
| Doris G. Ellsworth, A. B. | Secretary, Teacher Placement |
| Hope S. Firestone, B. S. | Secretary, Evaluations for Teaching Credentials |
| Annie Fong | Clerical Assistant, Women's Physical Education Department |
| Berkeley Freeman | Assistant Secretary, Personnel Services |
| Jo Ann S. Gay | Stock Clerk, Business Office |
| Ethel Mae Hallock | Junior Typist-Clerk, Library |
| Genevieve M. Hamblen | Secretary, Personnel Services |
| Elizabeth M. Harrison | Book Repair Clerk, Library |
| Georgia Hochstetler, A. B. | Secretary, Campus Laboratory School |
| Dorothy W. Hoefer, A. B. | Secretary, Art Department and Health Services |
| Helen M. Hoyle | Intermediate Typist Clerk, Business Offie |
| Persis Hurlbut | Secretary, Audio-Visual Services |
| Irene Janeck, A. B. | Secretary, Physical Sciences Division |
| Marguerite Keeler | Secretary, Health, Physical Education and Recreation Division |
| Constance King, B. S. | Secretary to Dean of Women |
| Frances Kokko | Secretary, Music Department |
| Fay Landweer, A. B. | Secretary to Dean of Educational Services and Summer Sessions |
| Mildred H. LeCompte | Secretary to Librarian |
| Dorothy Livengood | Secretary, Life Sciences Division |
| Marjorie L. Lutz | Secretary, Education Division |
| Florence H. Merritt | Secretary, Extension Services |
| Esther L. Moe, B. S. | Senior Clerk, Registrar's Office |
| Miriam E. Moore, A. B. | Secretary to Dean of Instruction |
| Hester Newman | Secretary, Placement Office |
| Dona S. Norton | Secretary, Education Division |
| Donald G. Parker | Accounting Officer II, Business Office |
| Flavella G. Orton | Junior Account Clerk, Business Office |
| Mary B. Peel | Secretary to Executive Dean |
| Helen M. Perry | Receptionist, Registrar's Office |
| Edith E. Peterson | Junior Typist-Clerk, Library |
| Katherine Pyle, A. B. | Secretary, Veterans Office |
| June V. Roberts, A. B. | Intermediate Stenographer-Clerk, Business Office |
| Edna Ross | Intermediate Stenographer-Clerk, Registrar's Office |
| Florence B. Schneider | Telephone Operator |
| Dorothy P. Slough | Placement Secretary |
| Evelyn J. Steel | Secretary to Chairman of Graduate Studies |
| Juanita L. Stephenson | Admissions Secretary |
| Emma M. Struthers | Secretary to President |
| Tunis F. Tucker | Stock Clerk, Business Office |
| Betty L. Ulics | Intermediate Stenographer-Clerk, Business Office |
| Elaine C. Volz, B. S. | Evaluations Secretary |
| June E. Warren, B. S. | Secretary, Education Division |
| Marjorie Welcome, A. B. | Mimeograph Office |
| Florence E. Wiggins | Secretary to Dean of Men |
| Carolyn V. Williams | Bookkeeper, Grade 2, Business Office |
| Doris Wilton | Senior Clerk, Business Office |
| Eleanor C. Winkley | Junior Typist-Clerk, Library |

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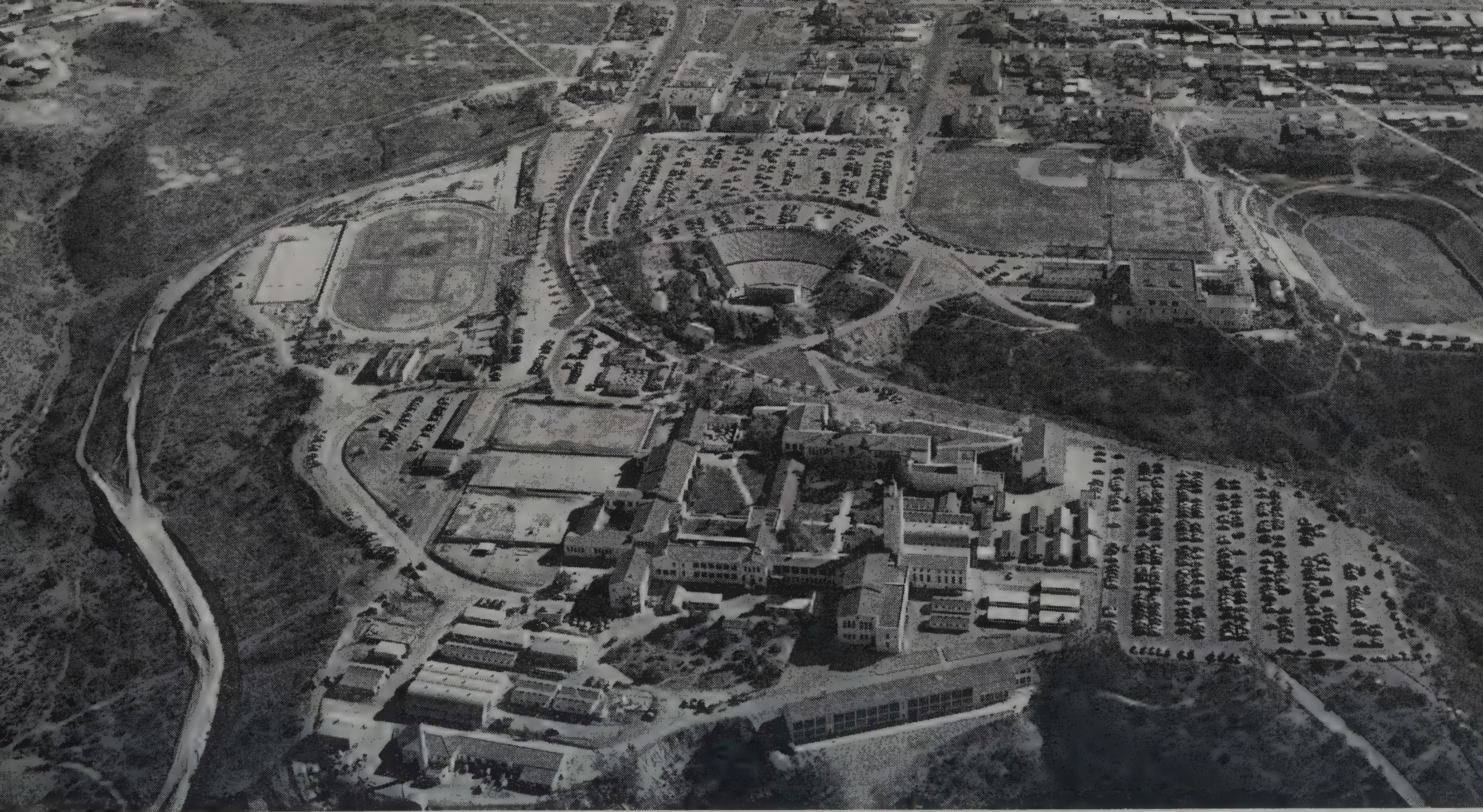
# SAN DIEGO STATE COLLEGE

## CATALOG
## AND
## ANNOUNCEMENT OF COURSES

FOR THE YEAR 1953-1954

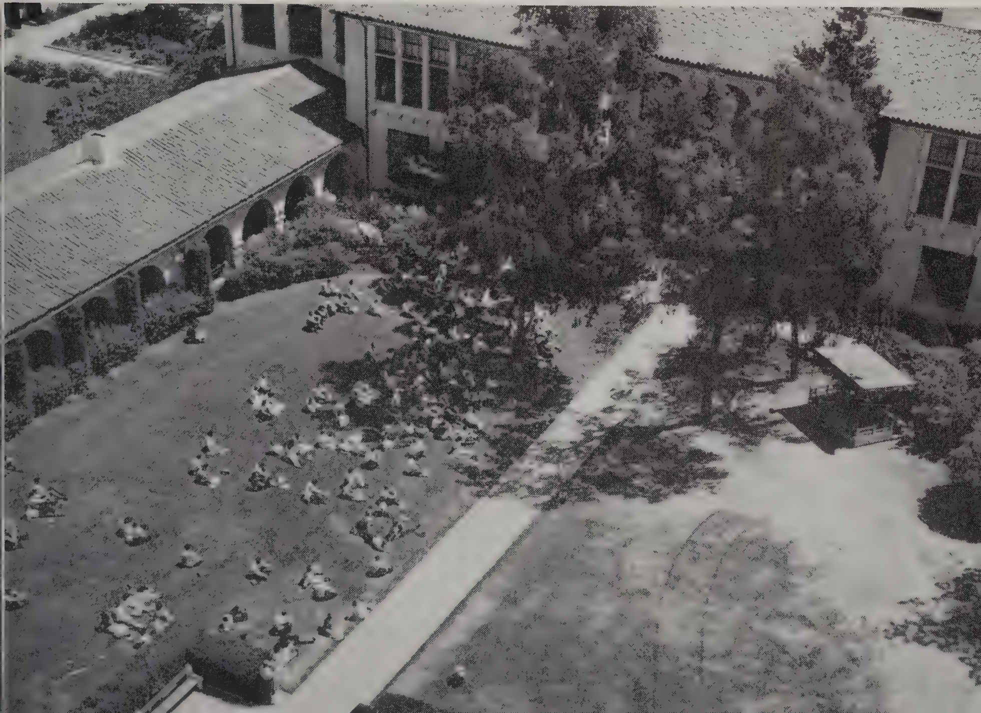
Administration Building



Aerial view of San Diego State College Campus. Nine additional buildings have been authorized or are under construction.

▲ AZTEC Gymnasium

Main Quad ▼



▲ Campus Laboratory School

Training Includes the ARTS ▼

# CATALOG

## AND

## Announcement of Courses

VOLUME 40

JUNE, 1953

## SAN DIEGO STATE COLLEGE

SAN DIEGO, CALIFORNIA

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# 1953

## JULY

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# 1954

## JANUARY

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## AUGUST

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## DECEMBER

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# CALENDAR 1953-1954

## SUMMER SESSIONS, 1953

Term I (6 weeks) June 29-August 7
Term II (3 weeks) August 10-August 28

## FALL SEMESTER, 1953-1954

| | |
|---|---|
| July 18 | Qualifying examinations for entering students (8.15 a.m.-3 p.m.) |
| August 1 | Applications for admission must be filed on or before this date. |
| August 24 | Qualifying examinations for entering students (8.15 a.m.-3 p.m.) (Last opportunity to qualify for admission to Fall semester). |
| August 24 | All applications and transcripts must be on file by this date to avoid late registration. |
| September 11, 14, 15, 16 | Testing and advising program. All new students are required to attend. |
| September 11 | General Culture test, required of all transfer students with 45 units or more who are candidates for secondary school credentials. (1-4.30 p.m.) |
| September 16 | All applications and transcripts for students applying for late registration must be on file by this date. |
| September 17-18 | Registration and payment of fees. Reservation of classes. (For evening program, see Extended Day bulletin). |
| September 18 | Late registration fee effective at close of registration schedule. (See time as announced in the "Class Schedule and Instructions for Registration, Semester I, 1953-54). (For evening program, see Extended Day bulletin). |
| September 19 | Fundamentals test, required of all transfer students with 15 units or more who are candidates for Teacher Education (8.30 a.m.-12 m.) |
| September 21 | Classes begin. |
| September 25 | Last date for registration and payment of fees for students registering late. |
| September 28, 29, 30 | File registration books. Late filing fee effective after 4.30 p.m., September 30. |
| September 29 | Applications for admission to Teacher Education, Little Theatre, 11 a.m. |
| October 2 | Last date for late filing of registration books and completion of all registration requirements. |
| October 5 | Last date to apply for refunds. |
| October 9 | Last date for filing applications for mid-year graduation. |
| October 23 | End of first six-week period. Deficiency notices due. |
| November 6 | Last date for withdrawal from classes without penalty of class standing. |
| November 11 | Holiday—Armistice Day. |
| November 26-27 | Thanksgiving recess. |
| December 4 | End of second six-week period. Deficiency notices due. |
| December 7 | File applications for June or summer graduation. |
| December 18 | Last date for withdrawal from classes for the semester. |
| December 18 | Last day of classes before Christmas recess. |
| December 21-January 1 | Christmas recess. |
| January 4 | Classes resume. |
| January 21-28 | Semester examinations. |
| January 29 | Fall semester ends. |

## SPRING SEMESTER, 1953-1954

| | |
|---|---|
| January 4 | Applications for admission to the Spring semester must be filed on or before this date. |
| January 15 | All applications and transcripts must be on file by this date to avoid late registration. |
| January 16 | Qualifying examinations for entering students (8.15 a.m.-3 p.m.). (Last opportunity to qualify for admission to freshman standing for the Spring semester.) |
| February 1 | General Culture test, required of all transfer students with 45 units or more who are candidates for secondary school credentials. (1-4.30 p.m.) |
| February 1, 2, 3 | Testing and advising program. All new students are required to attend. |
| February 3 | All applications and transcripts for students applying for late registration must be on file by this date. |
| February 4-5 | Registration and payment of fees. Reservation of classes. (For evening program, see Extended Day bulletin.) |
| February 5 | Late registration fee effective at close of registration schedule. (See time as announced in the "Class Schedule and Instructions for Registration, Semester II, 1953-54.) (For evening program, see Extended Day bulletin.) |
| February 6 | Fundamentals test, required of all transfer students with 15 units or more who are candidates for Teacher Education (8.30 a.m.-12 m.) |
| February 8 | Classes begin. |
| February 12 | Last date for registration and payment of fees for students registering late. |
| February 15, 16, 17 | File registration books. Late filing fee effective after 4.30 p.m., February 17. |
| February 16 | Applications for admission to Teacher Education, Little Theatre, 11 a.m. |
| February 19 | Last date for late filing of registration books and completion of all registration requirements. |
| February 22 | Holiday—Washington's Birthday. |
| February 23 | Last date to apply for refunds. |
| March 5 | Last date for filing applications for June or summer graduation. |
| March 12 | End of first six-week period. Deficiency notices due. |
| March 26 | Last date for withdrawal from classes without penalty of class standing. |
| April 9 | Last day of classes before Spring recess. |
| April 10-18 | Spring recess. |
| April 19 | Classes resume. |
| April 30 | End of second six-week period. Deficiency notices due. |
| May 14 | Last date for withdrawal from classes for the semester. |
| May 31 | Holiday—Memorial Day. |
| June 3-10 | Semester examinations. |
| June 11 | Spring semester ends. |
| June 11 | Commencement. |

## SUMMER SESSIONS, 1954

| | | |
|---|---|---|
| Term I | (6 weeks) | June 28-August 6 |
| Term II | (3 weeks) | August 9-August 27 |

# FEES AND EXPENSES

## PROBABLE EXPENSES FOR ONE SEMESTER

An estimate of the expense of attendance for one semester is given below. No estimate is made as to the cost of clothing, or other personal items, since these figures vary with the demands of the individual.

### A Partial Estimate of Expenses

One Semester

| | *Minimum* | *Maximum* |
|---|---|---|
| Fees | $24.00 | $31.50 |
| Books | 18.00 | 30.00 |
| Board and room | 275.00 | ---- |
| Transportation, lunches, incidentals | 20.00 | 60.00 |
| Miscellaneous | 5.00 | |

Before enrolling in college, the student should possess sufficient resources to meet the minimum expenses for one semester. A limited amount of clerical work in offices and in the library may be offered from time to time but ordinarily it is not sufficiently remunerative to reduce expenses materially.

### Enrollment Fees Payable at Time of Registration

Regular students (carrying more than 6 units):

Auditors pay same fees as students carrying courses for credit.

| | |
|---|---|
| Tuition | $6.50 |
| Materials and service | 7.50 |
| Total | $14.00 |

Limited students (carrying 6 units or less):

Auditors pay same fees as students carrying courses for credit.

| | |
|---|---|
| Tuition (one, two, or three units) | $5.25 |
| Materials and service | 2.25 |
| Total | $7.50 |
| Tuition (four, five, or six units) | $6.50 |
| Materials and service | 7.50 |
| Total | $14.00 |

**CORRECTION**
**Materials and Service**
**Fee Increased $1.00**
**since listing**

Student activity fee (not a state fee):

| | |
|---|---|
| Regular students | $10.00 |
| Limited students | 2.00 |

### Miscellaneous Fees

(Fees payable when service is rendered)

| | |
|---|---|
| Change of program | $1.00 |
| Failure to meet administratively required appointment or time limit | 2.00 |
| Evaluation of records for nonmatriculated students | 2.00 |
| Late registration | 2.00 |
| Transcript of record (first copy free) | 1.00 |
| R. O. T. C. deposit (unexpended portion is refundable) | 10.00 |

### Graduation Fees

| | |
|---|---|
| State teaching credentials (each credential) | $4.00 |
| Diploma | 1.00 |

The credential fee is collected through the college by cashier's check or post office money order made payable to the State Department of Education.

### Summer Session Fees

| | | |
|---|---|---|
| Tuition, each session | (Per unit) | $7.50 |
| Activity fee (not a state fee) | | 2.00 |

# THE COLLEGE

## FUNCTIONS OF THE STATE COLLEGES

The state colleges have three major functions, namely: (1) To help the individual student to develop a well-rounded and adjusted personality; (2) to promote in all students civic intelligence and competence; and (3) to create supplies of trained men and women to serve as teachers and officials in the elementary and secondary schools, to fill places of leadership in business and industry, and to transfer to graduate institutions to equip themselves to extend the frontiers of knowledge and to occupy the positions of leadership in various professions. In terms of publicly supported higher education, the state colleges and the university together make provision for the realization of all the essential objectives of higher education in our State.

To achieve their unique purposes the state colleges have developed and are improving offerings as follows:

1. Teacher education curricula for those students who plan to teach, supervise, or administer in the elementary school, the junior high school, and in secondary schools.
2. Preprofessional curricula.
3. Four-year curricula in such fields as business, industry, governmental services, homemaking, and social service.
4. General education for students who take work which leads toward the bachelor's degree or to the higher professions through graduate work.
5. Guidance services to assist the individual student to plan his educational program and to make his college and life adjustments.
6. Extension courses in appropriate fields.

The democratic controls exercised over the state colleges make them readily and effectively responsive to individual and community needs and encourage them continuously to make significant improvements in both curriculum and personal services. The state colleges are thus laboratories in which the facts and theories developed in research, in community living, and in daily association with students are reflected in an instructional program designed to provide educational services inherent in the principle of equality of opportunity.

## LOCATION AND ENVIRONMENT

Renowned as a winter resort with a mild but invigorating climate, San Diego has become equally famous for its cool summers. High cultural standards in art, music, literature, and science create a stimulating environment for a college. Many of these advantages are to be found in the heritage resulting from the expositions of 1915-16 and 1935-36, including the buildings themselves, which portray the best types of Spanish colonial art and architecture. Housed in these buildings are the Fine Arts Gallery, exhibits in anthropology, natural history, and American archaeology, which are in many respects unsurpassed. The outdoor organ, the Balboa Bowl, and the horticultural gardens make Balboa Park, in which all these facilities are located, world renowned. The Scripps Institution of Oceanography, operated by the University of California at La Jolla, gives opportunity for important cooperation in the biological sciences.

## BUILDINGS AND EQUIPMENT

On February 1, 1931, the college was moved to the new campus, located one mile north of the city's principal east-west boulevard, El Cajon Boulevard. The buildings are of Spanish-Moorish architecture which is well suited to the landscape and climate of this region. They include the Business Administration Building; the Science Building; the Fine Arts Building; the Library; the Little Theatre; the Music Building; the Physical Science Building; Scripps Cottage (a social clubhouse for women students); the Cafe and Book Store; and the Physical Education Building (a structure with adequate facilities for both men and women). During 1953 the following buildings were opened for use: the Administration Building; the Physics and Astronomy Laboratory Building; the Campus Laboratory School; and an addition to the Music Building. The Open Air Theatre, seating 4,200 persons, serves as a meeting place for large groups. There also is an excellent concrete stadium, constructed in a natural site, for football, and a separate track and field sport area available.

## FACILITIES FOR THE EDUCATION OF TEACHERS

The college maintains a modern elementary school on the campus where it has developed an extensive program for the education of elementary school teachers. The classroom-laboratory plan which calls for the use of work-rooms, the library, and shops affords unusual opportunities for the induction of students into teaching. By arrangement with the San Diego city and county schools, directed teaching is provided in the elementary and secondary schools.

## THE FACULTY

The faculty of 203 members has received advanced training in some 124 colleges and universities of the United States or foreign countries. The professional education of the faculty places the college at the 97 percentile position among teacher education institutions in the Nation. For listings and further details, see the Directory.

## THE LIBRARY

The library facilities of this college are noteworthy for an institution of its size. The library consists of over 150,000 volumes and receives more than 900 different periodicals selected to meet the requirements of a modern educational institution. Professionally trained librarians are available to render assistance to students and faculty in their reading and reference work.

The Campus Elementary School Library, representing a collection of 15,000 volumes, possesses equipment and building facilities that are unique.

## ACCREDITATION

San Diego State College is a member of the American Association of Colleges for Teacher Education and the Western College Association.

## LIVING ACCOMMODATIONS

Students living away from home may obtain assistance in locating housing through the office of the Associate Dean of Students (Dean of Women). A limited number of women students may be accommodated in Quetzal Hall, a private dormitory at the edge of the campus. Room and board at Quetzal Hall may be secured for approximately $275 per semester, payable in advance. Opportunities to reduce this figure by working a few hours each week are occasionally available. Reservations should be made in advance through the Manager of Quetzal Hall, 5192 College Avenue, San Diego 15, California. Single women students under the age of 21 who find other accommodations more desirable must file with the Associate Dean of Students (Dean of Women) a statement from the parent or guardian.

## VETERANS' EDUCATION AND HOUSING

The college has been approved by various accrediting agencies to offer courses for veterans leading to the baccalaureate in some 49 major fields and to the master's degree and various teaching credentials. In connection with the Personnel Services Center, a veterans' office is maintained on the campus to facilitate registration, aid in the establishment of benefits, afford special counseling services, and serve as an information center.

Through the City of San Diego, 400 family units formerly under the jurisdiction of the Federal Public Housing Authority have been made available to the college for the housing of its married veterans. These units are located some eight miles from the campus proper at Aztec Terrace, near Old Town and Loma Portal. Applications for housing at Aztec Terrace are made through the office of the Associate Dean of Students (Dean of Women).

## STUDENT ACTIVITIES

A rich field of extracurricular activities is made possible through the Associated Students. The *Student Handbook*, available at the time of registration, gives information concerning the nature and scope of these opportunities. During the college year 1952-53, seven governmental organizations, six service organizations, 31 departmental and honorary organizations, 12 religious organizations, 16 national fraternities, and 11 national sororities were officially recognized on the campus. Full programs of intramural and intercollegiate athletics are likewise maintained. Students are urged to select extracurricular activities carefully in order to receive optimum benefit from group experiences and to maintain continuous records of good scholarship.

## STUDENT HEALTH SERVICE

As a part of the program of student personnel services, the college provides health services for the protection and maintenance of student health. These health services, under the direction of a medical doctor assisted on a part-time basis by several medical specialists, are available to students for consultation, treatment of minor physical difficulties and emergencies, and counsel as to additional proper procedures. Two full-time nurses are on duty. During the weeks the college is in session students may obtain appointments with specialists who are on duty.

A complete physical examination is required of each student at the time of admission to the college. Careful attention is given to students undergoing private remedial treatment and to those for whom a modification of study load or amount of participation in physical activities seems advisable. A follow-up procedure is in effect for students who have been urged to consult their family physician for correction of defects found in the examination.

Physical examinations are likewise required of and provided for all teacher education students at time of admission to and graduation from the various credential programs. They are also required before students are authorized to participate in the organized program of intramural recreation or in intercollegiate athletics. A college physician is present at all major athletic contests, and on call in case of need for other regularly scheduled events.

## PERSONNEL SERVICES CENTER

The college offers the services of a trained staff to students who wish help in the solution of problems which are personal, social, academic, or occupational in nature. It is a program designed to help students gain the greatest possible advantage of their college experience. Agencies and facilities cooperating in the effort to assist students include the student health service, reading, writing, and study laboratory, the speech improvement program, mathematics clinic, the placement and occupational guidance service, veteran's service, and a staff of personal counselors. Students who wish to take advantage of these facilities may do so through the Personnel Services Center.

## PLACEMENT OFFICE

The Placement Office provides a central source of information on placement opportunities and vocational trends. The staff assists undergraduates in finding part time employment. Full time employment for graduates or former students is facilitated through contacts with schools, businesses, and industries in this locality.

## SCHOLARSHIPS

A number of scholarships for both men and women have been made available through the efforts of the alumni, civic organizations, student organizations, business and professional groups and individuals, and other friends of the college. Superiority in ability and achievement, strength of character, and worthiness from the point of view of need are the standards upon which selection is based. Scholarship aid is limited for the most part to students who have completed at least one semester at San Diego State College. All scholarship applications are made through the office of the Associate Dean of Students (Dean of Women).

Unless otherwise stipulated, all scholarship awards are determined and announced by the faculty Committee on Loans and Scholarships in October of the college year. Applications for scholarships for the fall semester must be filed with the office of the Associate Dean of Students (Dean of Women) prior to October 15th. The following scholarships are available for 1953-54.

**ALPHA GAMMA DELTA.** This sorority presents a $50 award each year to the student in the sorority with the highest grade point average.

**ALTRUSA CLUB.** Two scholarships of $50 each are made available annually by the Altrusa Club of San Diego. Applications are considered from women students enrolled in San Diego State College who are worthy and in need.

**ALPHA PHI OMEGA.** A $50 scholarship will be awarded each semester to a student whose grade point average is 1.5 or better. If an entering freshman, the student must have had a "B" average in high school. Students must apply through the Committee on Loans and Scholarships. The Committee will select three applicants for recommendation to Alpha Phi Omega for final selection.

**AMERICAN ASSOCIATION OF UNIVERSITY WOMEN—SAN DIEGO BRANCH.** A scholarship to be awarded annually by Mrs. W. O. Shackelford, a member of the San Diego Branch of the American Association of University Women, to encourage qualified and gifted women to enter the teaching profession. Sixty dollars a semester will be given to an undergraduate woman student in her junior or senior year of college who is preparing for elementary or secondary school teaching. She must have a "B" average or better. The recipient is required to teach at least one year after graduation or repay the amount received from this award. Applications are obtained from the Office of the Dean of Women and selection of candidate is made by the Loans and Scholarships Committee with the approval of the Scholarship Committee of the San Diego Branch of A. A. U. W.

**AMERICAN ASSOCIATION OF UNIVERSITY WOMEN.** One scholarship of $100 is given each year in June to a graduating senior who will begin work in an accredited college or university toward a higher degree or credential. The scholarship is made available by the San Diego Branch of the American Association of University Women. Interviews with representatives of that organization are required.

**AMERICAN ASSOCIATION OF UNIVERSITY WOMEN, EL CAJON VALLEY BRANCH.** An annual scholarship of $50 is presented to a young woman entering San Diego State College. Selection for the award is made by the club.

**ANONYMOUS (B).** A scholarship of $100 is given each year to be divided among students in financial need, at the discretion of the Committee on Loans and Scholarships. The committee gives consideration to scholastic attainment, financial need, and character.

**ANONYMOUS (E).** A $50 scholarship, awarded each semester through the Committee on Loans and Scholarships, is made available by a public spirited citizen who prefers to assist a student majoring in science.

**ASSOCIATED ARTS OF SAN DIEGO.** A $150 scholarship for a period of two years to a student outstanding in the Speech Arts Department.

**ASSOCIATION OF CHILD EDUCATION.** The Association of Child Education makes available each year a $50 scholarship to a student in the Kindergarten-Primary program. The award is customarily made to an upper division student showing promise in a particular field who is in need financially.

**BARNES CHASE COMPANY BASEBALL SCHOLARSHIP.** Donated by Mr. and Mrs. Norman R. Barnes. Twenty-five dollars a month for 10 months, from September through June. Applicant must be officially enrolled in the college as a regular student in good standing; must maintain a satisfactory scholastic record and be progressing toward an academic objective; must be a member of the freshman or varsity baseball team; and be of sound moral character. The selection of the recipient will be recommended by the baseball coach and approved by the athletic department with the final approval of the Committee on Loans and Scholarships.

**BARNES CHASE COMPANY BASKETBALL SCHOLARSHIP.** (Same as above except for basketball player.)

**BLUE KEY.** Two scholarships of $50 each shall be given annually; one each term. One shall be awarded an entering male freshman student, preferably from San Diego County. The other scholarship will be awarded to a male student in the lower division who has completed at least one semester (12 units) of work at San Diego State College. Selection will be made by the Committee on Loans and Scholarships.

**BURGENER, CLAIR W., SPEECH SCHOLARSHIP.** A four-year scholarship of $50 per semester will be awarded to an entering freshman who is outstanding in public speaking and general scholarship. Recommendations will be made by the Speech Arts Department with final selection by the Committee on Loans and Scholarships.

**CAP AND GOWN.** One $50 scholarship is awarded annually to an upper division woman student who has attended San Diego State College for at least one semester and who has maintained at least a "B" average in scholarship for her entire college career. Applications may be secured from the Office of the Dean of Women or the San Diego State College chapter of Cap and Gown.

**CHI OMEGA FRATERNITY** awards annually a $20.00 scholarship to a student outstanding in the Sociology Department.

**CONVAIR MANAGEMENT CLUB.** Three awards are offered to seniors graduating from high school who are sons or daughters of Convair employees. The money is held in trust at the college and funds administered by the college under the rules laid down by the Committee on Loans and Scholarships. Applications are made through the Convair Management Club.

**CORDTZ SCHOLARSHIP IN SPEECH.** Fifty dollars a semester for eight semesters will be awarded to a student with a major in speech with advertising as a possible vocational goal. The student must have a 1.3 grade point average or better. The applicant will be selected by the Speech Arts Department with final approval by the Cordtz Outdoor Advertising Company. Application should be made to the Chairman of the Speech Arts Department.

**DANCE CLUB OF SAN DIEGO STATE COLLEGE.** The Dance Club of San Diego State College has established a $50 scholarship to be awarded an outstanding dancer from the club to be used for tuition at a recognized summer school of the dance.

**DAUGHTERS OF THE AMERICAN REVOLUTION.** Two scholarships of $25 each are presented each spring, one to a young man and the other to a young woman outstanding in citizenship and Americanism. Applicants should have at least a "B" average in scholarship, should be able to demonstrate need for financial assistance, and should have junior standing in the college when selected. The selection is made by the faculty Committee on Loans and Scholarships and presentation of awards is made at a luncheon on Flag Day, which is given by the Daughters of the American Revolution.

**DEBATE SCHOLARSHIP.** $50 will be given to a student enrolled at San Diego State College who is outstanding in debate. Selection will be made by the Speech Arts Department with final approval by the Committee on Loans and Scholarships.

**DELTA DELTA DELTA NATIONAL FRATERNITY ALLIANCE.** $100 a year will be given for five years in memory of Georgia Aiman Shattuck. This scholarship is to be awarded to a woman student, in the upper division, who has been admitted to the teacher education curriculum, with a "B" average in all college work, and who is in financial need. Applications should be secured from the Office of the Dean of Women.

**ENGINEERS CLUB OF SAN DIEGO.** Awards of from $50 to $100 are made annually by this organization to students majoring in engineering. Applications are made through the Loans and Scholarships Committee of the college which recommends three candidates to the Engineers Club of San Diego for final selection.

**ESCONDIDO BUSINESS AND PROFESSIONAL WOMENS CLUB.** Two $100 scholarships are given anually to two high school graduates who plan to attend San Diego State College. These students are selected by the club on basis of good citizenship, good grades and participation in activities.

**FACULTY DAMES.** Two scholarships of $50 each are given annually to deserving women students selected by the Loans and Scholarships Committee.

**FLEMING, HARVEY, GOLF.** Through a trust fund set aside for awards to exceptional golf players who enroll in college, scholarships of $250 are given. This is a competitive award.

**FOOTHILL BUSINESS AND PROFESSIONAL CLUB.** Two $50 scholarships will be awarded to young women students entering San Diego State College from Grossmont High School.

**FRESHMAN CLASS, 1952-1953.** Two scholarships of $50 each will be awarded in the fall of 1953, one to an entering freshman man and one to an entering freshman woman. The scholarships will be awarded to students who have demonstrated leadership in high school activities. Final selection will be made by the Committee on Loans and Scholarships.

**HALE, E. T., ATHLETIC SCHOLARSHIPS.** $25 a month or more is donated for use of the Athletic Department in scholarships to outstanding athletes.

**HALE, E. T., TUITION SCHOLARSHIPS.** Four $30 scholarships are awarded annually by Mr. Hale to give financial aid to deserving students. Applicants must be officially enrolled in the college as regular students, or must be entering freshmen with evidence that they are capable of doing college work; must be interested in playing freshman or varsity basketball; and must be of sound moral character. Selection of the recipients will be recommended by the basketball coach and approved by the athletic department with final approval of the Loans and Scholarships Committee.

**HOLTVILLE, WOMAN'S CLUB OF.** A scholarship of $100 is made available to an outstanding student by the Senior and Junior Woman's Club of Holtville. Selection of the student is made by the club.

**JOB'S DAUGHTERS BETHEL NO. 40.** One deserving young woman is selected by Bethel No. 40 to receive a four-year scholarship of $1,000. The applicant must be an outstanding member in the Bethel, have need for scholastic aid, and have at least a "B" average.

**JONES, SYBIL ELIZA MEMORIAL.** A scholarship of $100 is awarded annually to a student in drama. Applicant must be officially enrolled in at least his fourth semester in speech and drama with participation in dramatic productions on the campus. He must have at least a "C" average in all college work. Applications are made to the Speech Arts Department for action and awards are made after approval of the faculty Committee on Loans and Scholarships.

**KAPPA ALPHA PSI FRATERNITY—SAN DIEGO ALUMNI.** An annual $50 scholarship ($25 per semester) is awarded a student graduating from high school for fees at San Diego State College. The fraternity makes the selection.

**KAPPA ALPHA THETA MOTHERS CLUB.** A scholarship of $50 is awarded annually to the member in the local chapter who has made the highest grade point average for the school year.

**KAPPA BETA NU.** A $100 scholarship is offered annually to a junior or senior woman student in elementary teacher education. Applicant must be a resident of San Diego County who is in financial need. Final selection rests with a scholarship committee of Kappa Beta Nu.

**KAPPA DELTA PI.** Two $25 scholarships are awarded annually by Kappa Delta Pi of San Diego State College. Selection for awards is made by the group.

**KAY JEWELERS SCHOLARSHIP.** $30 a semester for eight semesters is awarded an entering freshman. This scholarship is to be given alternating years to men and women students. In the fall semester, 1953, the scholarship will be awarded to a young woman. Selection is made by the Committee on Loans and Scholarships from applications received from high school students.

**KNIGHTS TEMPLAR EDUCATIONAL FOUNDATION OF CALIFORNIA.** Ten scholarships of $50 each will be given annually to students enrolled at San Diego State College. Applications are received by the Committee on Loans and Scholarships of the College. Final awards are made on basis of ability, need, and personality, with preference shown upper division students.

**LA MESA EVENING WOMEN'S CLUB.** A $75 scholarship is awarded a senior in high school who is entering San Diego State College. Selection is made by the club.

**LINKLETTER, ART.** Each June four $50 awards will be made to students graduating from San Diego City and County high schools: (1) one to a girl and one to a boy graduating from high schools with enrollment of 1,000 or over; and (2) one to a boy and one to a girl from high schools with enrollment under 1,000. Applications must be sent to the Committee on Loans and Scholarships of the College. Selection is based on scholarship, citizenship, and need.

**MARCY, MAY FINNEY.** Fifty-dollar scholarships are awarded from this fund to women students in upper division. Applications are made to the Dean of Women and awards made upon recommendation of the faculty Committee on Loans and Scholarships to Mrs. Marcy and a committee of members of Cap and Gown on San Diego State College campus.

**MUSIC DEPARTMENT SCHOLARSHIPS.** A limited number of Music Department scholarships covering the costs of tuition, books, and other supplies are available to regular course music majors upon application to the Chairman of the Music Department. The awards of these scholarships are based upon financial need, scholarship, and performing talent as demonstrated in auditions before a Scholarship Committee of the Music Department. All recommendations of this Committee are subject to the approval of the Committee on Loans and Scholarships of the college.

**NATIONAL LEAGUE OF AMERICAN PEN WOMEN—SAN DIEGO BRANCH.** A scholarship of $50 will be awarded annually to an outstanding woman student. Selection will be made from students in the fields of art, music, and creative writing. In the first term of 1953-54, consideration will be given a student specializing in creative writing. Recommendations must come from the English Department and be approved by the Committee on Loans and Scholarships.

**NOMA SCHOLARSHIP.** Presented by the National Office Management Association. $100 a year is provided to a student planning to major in Office Management. The scholarship will be restricted to students desiring to major in Office Management beginning with their junior year. Applications may be secured from the Office of the Dean of Women or the Chairman of the Department of Business Education, Secretarial and Office Management, not later than May 15th each year. The student chosen will be notified by June 10th.

**NORTH PARK KIWANI-ANNES.** One scholarship of $50 a semester for a year is awarded annually by this group to a male student preparing for teaching. The recipient must have at least junior standing at the time and be approved by the Committee on Loans and Scholarships.

**OPTOMETRIC ASSOCIATION OF SAN DIEGO COUNTY—WOMAN'S AUXILIARY.** Fifty dollars is awarded annually during the spring semester to a student who meets the qualifications set up by the Auxiliary. The award is based on scholarship, qualities of character and personality, high moral integrity, and need. Applications should be made to the Woman's Auxiliary of the San Diego County Optometric Association.

**OSTEOPATHY AUXILIARY** of San Diego County awards annually $100 to a student who has graduated from San Diego State College and has been accepted for enrollment in the College of Osteopathy in Los Angeles.

**PANHELLENIC OF SAN DIEGO STATE COLLEGE.** $50 is given annually to the sorority member who has made the highest grade point average in the fall semester.

**P. E. O. SCHOLARSHIPS.** Various chapters of this organization assist worthy students in amounts ranging from $15 a month to $50 a semester. Usually the selection for the awards is made by the chapter itself.

**PI LAMBDA THETA.** An annual scholarship of $50 will be given to a senior student in education. The selection will be made by the fraternity with approval of the Committee on Loans and Scholarships.

**ROTARY INTERNATIONAL CLUB.** Scholarships of various amounts have been awarded students by El Cajon, Escondido, Old Mission, San Diego, Oceanside, and Vista Rotary Clubs. Applications should be made to the Rotary Club.

**SAN DIEGO BUSINESS AND PROFESSIONAL WOMEN'S CLUB.** A $50 scholarship is awarded annually to a worthy young woman attending San Diego State College having at least a "C" average.

**SAN DIEGO CITY PANHELLENIC.** Two $50 scholarships are awarded annually to two upper division women students. Applications are made through the faculty Committee on Loans and Scholarships and selection is left to the discretion of the committee.

**SAN DIEGO CITY TEACHERS ASSOCIATION.** Two scholarships of $50 each are presented each year to prospective teachers with no restrictions as to college year. Applications are made on forms supplied by the San Diego City Teachers Association and are reviewed by the association's committee on scholarships. Personal interviews are required, and final selection is made by that committee.

**SAN DIEGO COUNTY TEACHERS ASSOCIATION.** Two $100 scholarships are made available annually by this group of teachers. Awards are made to students in the field of elementary education and final selection rests with the Committee on Loans and Scholarships.

**SAN DIEGO SOCIAL WORKERS CLUB.** A scholarship of $50 each semester is made available for an upper division student intending to enter the field of social work, who has above average scholarship and shows evidence of financial need. Awards are made each semester by the Committee on Loans and Scholarships. Applications may be secured at the Office of the Dean of Women.

**SENN, PERCIE BELL, SCHOLARSHIP IN PUBLIC SPEAKING.** An annual scholarship is made possible by the generosity of Admiral Elliott Senn, who has donated $1,500 to the San Diego State College Foundation for the purpose of assisting students in public speaking. This will be awarded to an entering freshman or any qualified student in the field of debate. Awards are made by a committee appointed from the Speech Department, with the final approval of the faculty Loans and Scholarships Committee.

**SOUTHLAND CLUB SCHOLARSHIP.** $50 award made available by the Southland Club for Business and Professional Women to a junior or senior woman student who plans to enter business or a profession. The student must have at least a "B" average; she must have been graduated from a San Diego City or County high school and must be of good moral character and in financial need. Applications made at the Office of the Dean of Women and approved by the Committee on Loans and Scholarships.

**STEINMAN-HILLEL.** Mr. and Mrs. Lou Steinman, members of the San Diego Lasker Lodge of the B'nai B'rith, which sponsors the Hillel organization on the San Diego State College campus, have set aside $400 for scholarships, $50 to be awarded annually for the next 8 years to a student who has done the most to further the cause of interfaith cooperation among the students of the campus. The selection of the awardee shall be made by a committee of three judges.

**STOTT, DOROTHY CRANSTON.** Each June a scholarship of $100 will be awarded to a student who has attended the San Diego State College for at least two years and who is being graduated or has been graduated by the San Diego State College with a major in English who begins or continues work in the San Diego State College, or in any other accredited college or university, towards a higher degree or credential. The selection is made by the Department of English with approval by the Committee on Loans and Scholarships.

**STOTT, K. W.** Each June a scholarship of $100 will be awarded to a student who has attended the San Diego State College for at least two years and who is being graduated or has been graduated by the San Diego State College with a major in History who begins or continues work in the San Diego State College, or in any other accredited college or university, towards a higher degree or credential. The selection is made by the Department of History with approval by the Committee on Loans and Scholarships.

**TEACHER EDUCATION SCHOLARSHIP.** The California Congress of Parents and Teachers, Inc., each year gives $300 to be awarded to one or two students. Selections are made upon the following conditions: (1) The recipient must have high qualifications and be in financial need; (2) The scholarship will be granted to students training to teach in the public elementary schools of California; and (3) The award shall be limited to students in the junior and senior years and graduate level.

**TOWN AND COUNTRY CLUB, ESCONDIDO, CALIFORNIA.** A $200 scholarship is given an outstanding student graduating from Escondido High School who plans to attend San Diego State College. Qualifications for this award and final selection are made by the Town and Country Club.

**VISTA BUSINESS AND PROFESSIONAL WOMEN'S CLUB.** $100 scholarship made available to one or more International students to assist them with tuition fees.

**WALKER, RALF MARC.** A scholarship in the amount of $500 is made available by the Walker-Scott Corporation in memory of the late Mr. Ralf Marc Walker to a woman student majoring in merchandising or retail trade at the San Diego State College. The scholarship is presented to a girl in Walker's Hi-Debber Council each year. The total scholarship is deposited in the San Diego State College Foundation and is handed to the recipient at the rate of $50 a semester for each of the first three years and $100 a semester for the two senior semesters.

**WEINBERGER, HENRY, INTERFAITH SCHOLARSHIP.** A scholarship $100 is awarded in April of each year to the student of any religious faith enrolled San Diego State College who is judged to have done the most to further inter-th ideals among the students of the college during the year of the award. This ıolarship is made available by Mr. Henry Weinberger of the Lasher Lodge of ıai B'rith, under auspices of the B'nai B'rith-Hillel Councilorship on San Diego ıte College Campus.

**WOMEN'S AUXILIARY OF SAN DIEGO DENTAL SOCIETY.** An annual ard of $100 is made available by the Women's Auxiliary of San Diego Dental Society an outstanding male student in pre-dentistry.

## LOANS

Short term loans are available to students who have attended San Diego State llege for at least one semester and who have demonstrated ability to do satisfactory lege work.

Several long term loans are also available including loans from the Martha rnum Memorial Loan Fund which is for the benefit of students in teacher education.

Applications for loans are made through the Office of the Associate Dean of ıdents (Dean of Women).

# ADMISSION AND REGISTRATION

## GENERAL ADMISSION REQUIREMENTS

High school graduates and other applicants possessing equivalent preparation may be admitted to this college upon evidence of fitness to profit by college instruction, such fitness to be shown by previous scholastic records, by evidence of good moral character and personal qualifications, and by satisfactory scores on tests which the college may require.

Application for admission should be made at the Admissions Office.

## ADMISSION OF HIGH SCHOOL GRADUATES

(1) A high school transcript must be presented showing satisfactory scholarship, and (2) applicants must demonstrate readiness for college instruction by making satisfactory scores on such tests as the college may designate.

Admission to freshman standing with **regular status** will be granted if the student has earned A or B grades in not less than 16 semester courses during the tenth, eleventh and twelfth grades. Individuals who fall slightly below this standard may be admitted if qualifying examination scores are sufficiently high to indicate probable success in college. In preparing for college admission, high school students are urged to consult their advisers and plan a program in high school that will prepare them adequately to pursue their chosen curriculum at the college level.

## ADMISSION BY EXAMINATION

Certificates of successful examination before the College Entrance Examination Board will be accepted when candidates cannot meet the above scholarship requirements.

## ADMISSION OF ADULTS TO SPECIAL STATUS

**Adult special status** (non-matriculated) may be granted, in exceptional cases, to persons over 21 years of age who do not fully meet the college entrance requirements provided that ability to do college work is satisfactorily demonstrated through qualifying examinations administered by the college. Such students may be transferred to regular status upon completion of 24 or more units of college work taken in residence with grade average of C or better. Full credit is allowed for all regular college work completed.

**Special students** (non-matriculated) are those students carrying courses in the Extended Day Program only or other students who may be granted permission to take limited work. Special students are not eligible as candidates for a degree until all entrance requirements have been met; however, courses satisfactorily completed carry full college credit.

**Special graduate students** (non-matriculated) are graduates who have not qualified for admission to graduate status. (See *Admission to Graduate Study.*)

## ADMISSION WITH ADVANCED STANDING

Credit earned in recognized institutions of collegiate grade will be evaluated as advanced standing toward the graduation requirements of this institution. For admission with advanced standing, an applicant must have earned at least 12 semester units in an accredited four-year institution, or 24 semester units in an accredited junior college, with a C average or better for all college work undertaken. If the applicant has completed less than 12 semester units, he may be considered for freshman admission on the basis of his high school record; however, all work undertaken at the college level must be reported by the student and be of C average or better. If the applicant from a junior college has met the freshman requirements for admission to this institution, he may be admitted to advanced standing with less than 24 units of college work with a C average or better for all work undertaken. **A maximum of 64 units of work earned in a junior college may be transferred to this institution.**

Any student applying for admission to this college must report all high school and college work undertaken by furnishing official transcripts from each school or college. No part of this work may be disregarded.

An applicant from a non-accredited college may be admitted by action of the Board of Admissions if his college record and qualifying examination scores meet the admission requirements. Credits earned in non-accredited colleges or universities may be accepted provisionally, but will not be counted toward graduation requirements until the student has earned 24 semester units in residence with at least a C average.

Students seeking admission with advanced standing must furnish complete transcripts of all work attempted beyond the eighth grade. If an official evaluation is desired, a fee of $2 must accompany the application and be received together with all transcripts at least 30 days before the date of registration. At least 45 semester units must be completed before a student may apply for an evaluation.

## ADMISSION TO GRADUATE STUDY

Admission to the college must first be secured. A re-application must be filed upon re-entrance following graduation with a bachelor's degree from San Diego State College. Apply at the Office of Admissions.

**Graduate status** may be granted to applicants who have regularly applied at the Office of Admissions and have filed official transcripts as evidence of their possession of a bachelor's degree from an accredited institution. Refer to master of arts degree and to Teaching Credentials.

**Graduate special status** is granted to those who are provisionally admitted to graduate study. It is given to a student (1) who has not completed all admission procedures required for graduate status and (2) to a student whose bachelor's degree was earned at a non-accredited college. A student from a non-accredited college will be eligible for graduate status when he has earned a grade point average of 1.5 on 12 or more units of approved upper division work at this college and has cleared all undergraduate deficiencies.

**Admission to candidacy** for the master's degree or for a teaching credential may be achieved by meeting the respective specific requirements. Refer to the section of the bulletin on the master of arts degree.

**Admission to courses numbered 200-299** requires graduate status and the meeting of specific prerequisites. A graduate student who may be permitted to enter a graduate course pending full graduate status will be given only upper division credit if graduate status is not achieved by the end of the term in which the course is given.

## DEGREES OFFERED

The following degrees are offered by the college: bachelor of arts, bachelor of science, bachelor of education, bachelor of vocational education, and master of arts.

## CERTIFICATES OFFERED

The following certificates are offered by the college: Certificate in Public Administration and Certificate in Social Work Administration. Requirements for these certificates may be completed in the extended day program. For further explanation of requirements, refer to the section of the bulletin on public administration.

## EXTENDED DAY PROGRAM

In order to meet the needs of adults in the community for work on the college level, courses are offered in the late afternoon and evening under an extended day program. These include both undergraduate and graduate courses and carry full college credit. Classes offered under this program consist of those courses normally scheduled as part of the regular college offerings and are taught by faculty of the college, but moved to a late afternoon or evening hour to permit in-service teachers, public personnel, businessmen, and others to attend. These courses cover a wide range of academic and educational subjects including education, business administration, public administration, engineering, and the sciences. A special bulletin describing the current offerings is issued each semester and may be obtained upon request from the Office of the Dean of Educational Services.

## EXTENSION PROGRAM

In order to serve more adequately the needs of the community, the colle cooperates with off-campus organizations and groups in arranging extension class in response to expressed needs when the group is sufficiently large to finance t instruction. Offerings are made each semester in a number of departments includi education, business administration, and the arts and sciences. Classes may be orga ized at various points within San Diego and Imperial Counties. A minimum of 15 20 students is usually required in order to establish a class. The usual class carri two units of credit and meets once a week, either in the late afternoon or evenin The minimum basic fee is $7.50 per unit. Interested persons desiring detailed inform tion regarding organization of classes or current offerings should contact the Dean Educational Services.

## AUDITORS

Properly qualified persons may apply for admission to attend classes as auditor Such students pay the same fees as those who take equivalent work for credit.

A student enrolled in a course for "audit" who wishes to change his program "credit" or a student who is enrolled in a course for "credit" who wishes to chan his program to "audit" must apply for this change of program at the Registrar's Offi within the time allowed for changes of program.

## TESTS REQUIRED AT REGISTRATION TIME AND LATER

1. A physical examination is required of all students entering or reentering t college after an absence of more than one semester, except that students carrying s units or less or students enrolled in Extended Day classes only are not required to ta the physical examination. This examination is scheduled during the testing and advisi period.

2. All entering students are required to take a college aptitude test, and tes for competence in English, mathematics and in speech. Remedial courses are establish in mathematics and speech for students failing these tests. Exceptions may be made f graduate students and for those who register for six units or less and for tho registered only in Extended Day classes.

3. All entering freshmen and college transfer students who present less th 12 semester units of college credit must take the regular battery of achievement a aptitude tests, including tests for competence in English, mathematics, and speec Remedial courses are established for students failing these tests.

4. Students entering teacher education should see admission requirements ou lined under Admission to Teacher Education.

## LATE REGISTRATION

Students who register after the scheduled registration days are subject to a la registration fee of $2. Students may be accepted for late registration with the approv of the Admissions Officer within five days beginning with the first day of class instru tion. Registration will be closed after that date. Students failing to complete all reg tration requirements within the period allowed, as announced in registration instru tions, are subject to cancellation of registration.

## CHANGES IN REGISTRATION

A student is responsible for any change in his program after the registratio book has been filed. Forms for changes in program must be secured at the Registrar' Office. A fee of $1 is charged.

### Regular Session Tuition Fee Refunds

(1) A portion of the tuition and service fees charged a regular session studen may be refunded if written application for refund is made not later than two week following the day of the term that instruction begins; and provided, further, that th amount of $1 shall be retained to cover the cost of registration.

(2) The late registration fee is not refundable.

The Business Office should be consulted for further refund details.

# GENERAL REGULATIONS

## INFORMATION

Inquiries relative to the college should be directed to the Registrar's Office.

## NUMBERING OF COURSES

Courses numbered 1 through 99 are in the lower division; those numbered 100 hrough 199 are in the upper division; and those numbered 200 or over are in the raduate division. Courses numbered 300 or over are professional education courses n the graduate level.

## GRADES AND GRADE POINTS

### Grades

The following grades are used in reporting the standing of students at the end of ich semester: A, excellent; B, good; C, fair; D, passing; F, failed; I, incomplete; r., credit (without grade); WP, withdrawal passing; and WF, withdrawal failing.

### Grade Points

Grade points are assigned as follows: Grade A, 3 points per unit; B, 2 points er unit; C, 1 point per unit; D, no point per unit; F or WF, no point per unit. Grades I, Cr, or WP are disregarded in computing grade points. The number of grade points student has earned in a subject is determined by multiplying the number of points e has received by the number of units allowed. The grade point average is determined dividing the grade points earned by the number of units attempted. A student ust earn at least a C average in all work undertaken at the college to qualify for degree or a transcript of record with recommendation to another collegiate insti-tion. Any course may be repeated, but not for additional credit; however, only the cond grade earned is considered in the student's average.

## INCOMPLETE GRADE

One calendar year beyond the end of the term when an incomplete grade is signed will be allowed for making up the incomplete without repeating the course, cept that incompletes in courses numbered 299 may be made up within the time lowed for completion of the M.A. degree.

## CLASS, UNITS OF WORK, AND STUDY LIST LIMITS

### Class

Students who have completed 0 to 29 units of work are classified as freshmen; to 59 units as sophomores; 60 to 89 units as juniors; and 90 or more as seniors.

### Units of Work

A unit of credit represents 50 minutes of lecture or recitation combined with o hours of preparation per week through one semester, or three hours of laboratory field work in the case of laboratory credit.

### Study List Limits

Students are not ordinarily permitted to enroll for more than 16½ units of credit vard graduation. A normal semester's program is 16 units.

Certain exceptions to this rule exist. If during the preceding semester the student s carried at least 12 units: (1) and a grade point average of at least 1.5 was earned, ½ units may be carried for credit toward graduation; (2) and a grade point average 2.0 was earned, 18½ units may be carried.

Students who enroll for more units than authorized, including concurrent college ırses taken outside this college, will not receive graduation credit for the excess its.

Exceptions to these regulations may be secured only through a petition to the Scholarship Committee.

No student may register for less than 12 units (the minimum full-time load) without the approval of the Dean of Instruction.

# PROBATION AND DISQUALIFICATION

## PROBATION

Any student whose scholarship record shows a cumulative deficit of seven or more grade points below a C average for all college work undertaken or for all work taken at this college will be placed on probation. A student transferring from another college may also be placed on probation by the Board of Admissions because of scholarship deficiencies at the other college.

Probation may be continued provided the student obtains a C average or better each semester while on probation and is not disqualified. The transfer student who was admitted on probation will remain on probation until all grade point deficiencies from the other college have been removed and until all work taken at this college is a C average or better. Other students will remain on probation until the grade point deficiency at this college has been reduced below seven.

## DISQUALIFICATION

Any student on probation whose scholarship falls belows a grade point average of 1.0 in any single semester is disqualified from further attendance at the college.

Any student who fails to pass one-half of the units attempted during any single semester is disqualified from further attendance at the college.

A disqualified student may be reinstated for reasons satisfactory to the Board of Admissions. Applications for reinstatement must be made on forms which may be obtained at the Admissions Office.

# WITHDRAWALS

Forms for withdrawal from class or withdrawal from college may be obtained at the Registrar's Office. If a student withdraws by the end of the eighth week of the semester, a grade of WP (withdrawal passing) will be recorded upon his permanent record for each class from which he has withdrawn. If he withdraws after the eighth week and not later than the end of the fourteenth week of the semester, either a WP or WF (withdrawal failing) will be recorded, depending upon whether he is passing or failing the course on the date of filing the request for withdrawal. (WF is equivalent to a failing grade.) After the fourteenth week, a final grade will be recorded for each class for which the student is enrolled.

**NOTE:** A student unofficially withdrawing from class or from college will receive failing grades in all courses for which he is enrolled. Applications for withdrawal must be filed officially at the Registrar's Office within the time limits stated above.

### Withdrawal to Enter Military Service

A student withdrawing from college to enter military service is entitled to apply for refund of tuition or for partial credit (but not both). One-third credit is allowed for completion of the first six weeks of the semester in courses for which the student is enrolled and has been in regular attendance; two-thirds credit for completion of the first 12 weeks of the semester in courses for which the student is enrolled and in which he is passing at the time of withdrawal. Entrance upon extended active military duty must be without unreasonable and unnecessary delay (normally 30 days) after the date of withdrawal from college to qualify the student for refund of tuition or partial credit. A student electing to receive a refund of tuition or partial credit must file official verification of the date of entry upon extended active duty.

# TRANSCRIPTS OF RECORD

Students may secure upon request one transcript of record without fee. Thereafter, a fee of $1 is charged for each transcript secured upon request. Once a student has matriculated in this college, transcripts from other schools will not be returned, or copies of them made. No fees are charged for transcripts required for military purposes.

Transcripts in the possession of students are to be regarded as unofficial records.

## EVALUATIONS

An evaluation is a summary of college work completed and of requirements to
e completed for a degree or credential. An evaluation fee of $2 is charged, unless the
tudent is fully matriculated and enrolled for four units or more in a regular semester.

**A student who has earned 45 semester units, or more, of college work should
pply at the Evaluations Office for an official evaluation.** The evaluation is made on
he regulations in effect at the time the student entered this college, provided that he
as been in uninterrupted attendance as a full-time student at this college; otherwise,
he evaluation is made on regulations currently in effect at the time the evaluation is
nade. An evaluation remains in effect so long as the student earns a minimum of 12
emester units in residence within each two-year period, beginning with the term
mmediately following the one in which the evaluation is made. Each summer session
erm is counted as a term. All evaluations are subject to changes imposed upon the
ollege by the State Board of Education. After an interval of five years from the time
n evaluation is made, courses in education to be applied toward a teaching credential
re subject to re-evaluation.

## ELIGIBILITY FOR DIRECTED TEACHING

No student shall be eligible for directed teaching (Education 116) leading to the
indergarten-primary, general elementary, general junior high, and special secondary
redentials who has not completed 75 units, education course prerequisites, been ad-
itted to Teacher Education, and whose entire record, as well as for the preceding
emester, does not average at least a 1.2 for all credentials except the junior high and
eneral secondary credentials which require a 1.5 grade average.

No student shall be eligible for directed teaching (Education 116 and 316) lead-
ng to the general secondary credential who has not been admitted to the teacher edu-
ation program prescribed for admission to candidacy for this credential.

## THE HONORS PROGRAM

Any student who at the end of the sophomore year has either attained an over-all
rade point average of 2.5 or who has attained a grade point average of 2.75 in his
ajor and not less than 2.0 in fields outside his major, and who has received the
pproval of his department or departments, may elect the honors program. Such
lection will enable the student to pursue a special program as outlined below. Any
tudent who feels that his qualifications approximate closely the scholarship standards
tated above may request admission to the honors program, subject to the approval of
is department or departments, and of the Committee on Honors.

Any student who wishes to apply for entrance into the honors program may
o so by filling out cards to be obtained from the Registrar's Office. The application
hould be approved by the 10th calendar day following the first day of instruction.
nits earned by students doing individual study under this plan will be recorded
nder the symbol 166 and will be subject to the formulated rules dealing with limita-
ions of student load.

Students in the honors program, so far as the facilities of the department and
e best interests of the students under its charge allow, shall be treated as benefits
eir individual needs and as their individual capabilities warrant. They shall be
ligible to enroll in honors or special study courses, credit in such courses to be limited
six units per semester unless otherwise recommended by the major department or
epartments and approved by the Honors Committee. In addition, they shall not be
eld to regular attendance in the established courses of their departments if, in the
pinion of the instructor, the objectives of such courses can be achieved through
ecial assignments and examinations. With the consent of the major department or
epartments, requirements concerning minors and specific courses or sequences in the
ajor may be modified. Each honor student shall be assigned to a member of his
ajor department for advice and direction.

Students in the honors program who fail to take advantage of the opportunities
ere offered may at the end of any semester be required to withdraw from the honors
rogram upon notification of the major department or departments. Students not in
e honors program who show unusual capacity, may request to be transferred to the
onors program contingent upon recommendation of the department and the Com-
ittee on Honors at the end of any semester.

## DEGREE WITH HONORS

Upon recommendation of the Committee on Honors, and with the approval o the faculty, graduation with honors shall be granted to those students in each graduating class who have done highly superior work as shown by high grade point averages

## DEGREE WITH DISTINCTION IN THE MAJOR

Upon recommendation of his major department, with the approval of the Committee on Honors and of the faculty, a student doing superior work in his major fiel may be graduated with distinction in that field.

## FINAL EXAMINATIONS

No final examination shall be given to individual students before the regula time. Any student who finds it impossible to take a final examination on the date scheduled must make arrangements with the instructor to have an incomplete grade reporte and must take the deferred final examination within the time allowed for making u incomplete grades.

## CREDIT BY EXAMINATION

Credit may be earned by examination under the following conditions: (1) th student must be a fully matriculated bona fide resident student enrolled in a regula semester at the college at the time the examination is administered; (2) approval t take the examination must be obtained from the Dean of Instruction and from th chairman of the department concerned, prior to the administration of the examination and (3) the student must pay the additional fees, if needed, to qualify as a regula student.

## CREDIT FOR EXTENSION COURSES

The maximum amount of extension credit which may be accepted toward th minimum requirements for the bachelor's degree is 24 semester units, not more tha 12 of which may be transferred from another college or university except that course taken through the United States Armed Forces Institute, or other official militar correspondence schools, shall not be included within these limits. The term "extensio credit" refers to both extension class work and work taken by correspondence. Extension credit does not count in satisfaction of the minimum residence requirement Extension courses are not accepted for graduate credit toward the master's degree

## CREDIT GRANTED FOR MILITARY SERVICE

The college is guided by the recommendations of the American Council on Education in granting undergraduate credit toward the bachelor's degree for military service. To obtain credit, the student must apply at the Admissions Office and file a photostat of discharge papers showing dates of active duty and service schools completed. These records should be submitted at the time of applying for admission t the college.

## TRANSFER TO GRADUATE SCHOOLS

Attention of students who plan to transfer to the graduate school of the University of California is called to the fact that the university reserves the right t evaluate and possibly reduce the credit in certain work in which this college has given credit toward the baccalaureate. Examples of such work would be credit for nurse's training, credit transferred from certain foreign schools, and certain vocational courses in junior colleges.

# THE MASTER OF ARTS DEGREE

## NATURE OF THE DEGREE

The master of arts degree is offered at San Diego State College in the field of teaching and for other teaching and supervisory services. Students receiving the degree for school service must hold a valid regular day school service California credential other than an emergency or provisional credential; or be a foreign citizen preparing to teach in foreign countries; or be a licensed teacher from another state with one year of experience. The master's degree is also offered in specified curricula for approved applicants preparing to teach in institutions not requiring teaching credentials, provided that a minimum of 12 units in professional education be included in their graduate year. Students may elect to concentrate in a subject matter major, in education, or in personal supervision and training. The following areas of concentration are now available:

*Teaching Majors:* Art, business education, chemistry, English, foreign language (Romance Language, French, and Spanish), health and physical education, history, life science (botany and zoology), mathematics, music, physics, and social science.

*Education:* Audio-visual education, elementary education, secondary education, elementary administration, secondary administration, elementary supervision, secondary supervision, pupil personnel services, and special education.

*Psychology:* Psychology, educational psychology, school psychologist.

*Personnel Supervision and Training:* For instructional and supervisory service in business, government, and industry.

## REQUIREMENTS

**Students who meet the following requirements are eligible for graduation with the master's degree:**

A. A minimum of 30 units of approved graduate work beyond the bachelor's degree. Thirty units must be completed within the seven year period immediately preceding the date when all of the requirements for the degree are completed. For justifiable reasons, the college may extend this period.

**B. 24 units in residence. Courses taken prior to the summer session of 1946 at San Diego State College, or any other California State College, may NOT be used as graduate work.**

C. Grade point average of 2.0 in all work taken after the bachelor's degree. Only grades of A, B, and C are acceptable toward the master's degree. (Marking system: Grade of A, 3 grade points; B, 2 grade points; C, 1 grade point; D, 0 grade points.)

D. Completion of the requirements for an approved California teaching credential, or the holding of one, such as the general elementary, general secondary, junior high, special secondary school, and school psychometrist credentials; or be a foreign citizen preparing to teach; or be a licensed teacher in another state, with one year of experience; or be preparing to teach or supervise in an institution which does not require a credential.

**E. Satisfactory completion of the candidate's degree program as approved by the Graduate Council.**

F. Satisfactory completion of a thesis or project, except in foreign language and business education.

## ADMISSION TO GRADUATE STUDY

A. Graduate Status may be granted to applicants who have regularly applied and have filed official transcripts at the Office of Admissions as evidence of their possession of a bachelor's degree from an accredited institution. (Two transcripts must be filed by students who expect to become candidates for the master's degree.)

B. Provisional admission to graduate study (Graduate Special Status) may be granted to one who holds a bachelor's degree from a non-accredited college. Such a student will be eligible for Graduate Status when he has earned a grade point average of 1.5 on 12 or more units of approved upper division work at this college and has cleared all undergraduate deficiencies. Special status is given also to those students who have not completed the regular admission procedures.

C. Apply at the Office of Admissions for admission to the college. For further detail refer to the section of the bulletin on Admission and Registration.

## ADMISSION TO CANDIDACY

A candidate for the master's degree must qualify as follows:

A. Apply for admission to candidacy at the Graduate Office. Students should appl during the first graduate term in attendance.* Admission cannot be complete however, until the student has earned 12 units at San Diego State College, c six units if his undergraduate grade point average was 1.5 or better.

B. Earn and maintain a grade point average of 2.0 on all graduate work.

C. Satisfactorily complete the following: (a) scholastic aptitude test for graduate (b) scholastic achievement test, and (c) such departmental tests as may l required.

D. Receive approval of candidate's major department.

E. File with the Graduate Office a complete program of study, which has been approve by the adviser.

## GENERAL REGULATIONS

A. Extension and correspondence courses are not acceptable toward the degree.

B. Maximum study load: Summer session, one unit per week of attendance; fall o spring, 15 units per semester of full-time attendance. (If employed full time three units of courses numbered 200-298 and two additional units of course numbered 100-199; or six units of courses numbered 100-199. Any courses i excess of these amounts must be approved in advance by the Chairman o Graduate Studies.)

C. All candidates who are taking the degree with school service credentials must com plete two units in Education 290 and one additional unit in a course in bibliog raphy (290) in the major department. Candidates preparing to teach or super vise in institutions that do not require a credential will substitute an approve course in procedures of investigation and report.

D. Candidates in all majors, excepting foreign language and business education shal complete a project or thesis, for which three units of credit are allowed. Student majoring in foreign language must pass a comprehensive examination and com plete eight units of courses in foreign language numbered 200-298. Student majoring in business education may select either the regular thesis plan or a comprehensive examination in lieu of the thesis.

E. The minimum requirement for a concentration in a major shall be: (1) eigh units of courses numbered 200-299, which may include credit for a project o thesis and one unit in bibliography, and (2) six additional units in the major o an approved related field, selected from upper division or graduate courses Candidates who are preparing to teach or supervise in institutions which do no require a teaching credential must take 12 units in education courses.

F. 12 units of work must be earned after admission to candidacy.

G. 10 units must be in courses numbered 200-299.

H. Two official conferences between the student and his thesis committee are required one for planning, which is to be held immediately after the appointment of th committee, and one for evaluation at the time of completing the first draft of th thesis.

I. A project or thesis, when required, must be completed four weeks in advance of th date of the convocation at which the degree is to be conferred.

J. An application for graduation must be filed at the Graduate Office four weeks befor date of graduation.

K. Candidates are advised to keep in touch with the Graduate Office concerning specific requirements for the typing of the project or thesis and final dates for submitting bound copies, dates of graduation, and other routine procedures concerning the degree.

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* (Fall or Spring: Apply during first six weeks of semester. Summer Session: Apply during first two weeks of term.)

# GENERAL REQUIREMENTS FOR THE BACHELOR OF ARTS AND BACHELOR OF SCIENCE DEGREES

## TYPES OF CURRICULA

San Diego State College offers the following types of curricula:

(1) Teacher education, leading to a degree and/or teaching credential.
(2) Arts and Sciences curricula, leading to a degree.
(3) Occupational curricula, leading to a degree or certificate.
(4) Preprofessional curricula, leading to admission to professional schools.

## GRADUATION REQUIREMENTS

Students entering San Diego State College for the first time, beginning with Summer Session, 1951, or thereafter, must complete a minimum of 124 semester units or the A.B. degree or a minimum of 128 semester units for the B.S. degree and comply vith other regulations specified by the college beginning with the academic year 1951-952 with subsequent changes.

Students having completed 12 semester units in residence at San Diego State College prior to Summer Session, 1951, who were eligible for graduation under the 950-51 regulations, must complete a minimum of 12 semester units in residence durng each successive two-year period, beginning with Summer Session, 1951, in order o continue eligibility for graduation under those regulations. Students not meeting his requirement or those who wish to graduate with majors, curriculums, or degrees ot in effect during the academic year 1950-1951, must meet the requirements which ecame effective with the academic year 1951-1952 with subsequent changes.

### GRADUATION REQUIREMENTS

**(a) A minimum of 124 semester units for the A.B. degree or 128 semester units for the B.S. degree, representing a four-year college course, are required for raduation.**

(b) The last 24 units of work leading to the bachelor's degree must be comleted at this college, including registration in at least two semesters, or summer ession equivalent on a week for week and unit for unit basis, for a total of 36 weeks f attendance.

**(c) At least a C average (1.0) in scholarship is required in all college work ttempted, in all work taken at this college, and in all upper division work in the major field.**

**(d) At least 40 upper division units are required for the A.B. degree or at east 36 upper division units for the B.S. degree.**

(e) The state requirements in American history, institutions, and ideals, United tates Constitution, and California state and local government must be completed for he bachelor's degree.

**(f) All requirements in general education, the major and minor fields and ny other requirements made by the college must be completed for graduation.**

### TESTS IN ENGLISH, MATHEMATICS, AND SPEECH

**Each student must demonstrate competence in the use of English, mathematics, nd speech as determined by tests administered by the college. Students failing to ass these tests satisfactorily are required to enroll in special remedial courses desigated by each department concerned. Passing the tests or completion of designated ourses is a requirement for graduation.**

## AMERICAN HISTORY, INSTITUTIONS AND IDEALS, UNITED STATES CONSTITUTION, AND CALIFORNIA GOVERNMENT

Each student of a state college to qualify for graduation shall demonstrate competence in the Constitution of the United States, and in American history, includin the study of American institutions and ideals, and of the principles of state and loca government established under the Constitution of this State, by completing appropriat courses, or by passing a comprehensive examination on these fields prepared an administered by each college. Students transferring from other institutions of collegiate grade, who have already met this requirement in college, shall not be require to take further courses or examinations therein.

**This graduation requirement may be fulfilled by any one of the followin alternatives:**

(1) By satisfactorily passing comprehensive examinations in both America history, institutions and ideals, and in the United States Constitution and principle of California government.

(2) By satisfactory completion of one of the following groups of courses:

- (a) History 17A and 17B
- (b) History 172A and 172B
- (c) Political Science 71A and 71B
- (d) Political Science 139A and 139B

(3) By satisfactorily passing a comprehensive examination in American history institutions and ideals and completion of one of the following groups of courses:

- (a) Political Science 101
- (b) Political Science 137A and 137B

(4) By satisfactorily passing a comprehensive examination in the United State Constitution and principles of California government and completion of one of th following groups of courses:

- (a) History 8A and 8B
- (b) History 179A and 179B

(5) By completion of one of the following groups of courses covering America history, institutions and ideals and completion of one of the following groups o courses covering the United States Constitution and principles of California government:

| *Courses on U. S. History* | *Courses on U. S. Constitution and California Government* |
|---|---|
| (a) History 8A and 8B | (a) Political Science 101 |
| (b) History 179A and 179B | (b) Political Science 137A and 137B |

(6) By completion of the graduation requirement in American history, institutions and ideals and the United States Constitution and principles of California government in other institutions of collegiate grade.

### Requirement in California State and Local Government

Students who have met the graduation requirements in American history, institutions and ideals and in the Constitution of the United States by completion o courses in institutions of collegiate grade outside the State of California, but wh have not met the graduation requirement in principles of California State and local government, may satisfy this requirement by satisfactory completion of one of the following courses:

- (a) Political Science 142 (also numbered under Journalism)
- (b) Political Science 143 (also numbered under Journalism)
- (c) Political Science 101 (provided that this course is not a repetition of a course taken elsewhere)
- (d) Political Science 71B or 139B (provided that the course is not a repetition of a course taken elsewhere)
- (e) History 17B or 172B (provided that the course is not a repetition of a course taken elsewhere)
- (f) History 189

## LOWER DIVISION AND UPPER DIVISION COURSES

A student is considered to have lower division standing until he has earned 60 semester units, at which time he attains upper division standing.

Courses numbered 1-99 are lower division courses; courses numbered 100-199 are upper division courses.

A student with lower division standing is not eligible to take upper division ourses, with the following exceptions: A student in the last semester of his sopho- ore year who is approaching upper division standing carrying sufficient lower division nits to complete the required minimum of 60 units may carry upper division units r the remainder of his study load. A student with sophomore standing may carry pper division courses for upper division credit provided that he has the written pproval of the chairman of the department and the Dean of Instruction. This written pproval must be filed in the Office of the Registrar on the form "Adjustment of cademic Record." Blank forms may be obtained by the student at the Office of the egistrar.

## GENERAL EDUCATION REQUIREMENTS

Forty-five semester units in courses designated in the college bulletin and in e schedule of classes as general education must be completed in addition to courses the major field, unless such courses are ones specifically required of all students as art of the general education program. These courses must be selected from the fields sted below with completion of the minimum number of units required and not ex- eding the maximum number of units allowed in each field in order to satisfy the quirement of 45 units in general education. The pattern requirements in general ucation may be fulfilled by examinations with an accompanying reduction in the 45 its but without course credit.

For specific explanation of the requirements within each field of general educa- on, refer to the explanation of requirements below.

| | *Minimum* | *Maximum* |
|---|---|---|
| (a) Social Sciences | 9 | 12 |
| (b) Natural Sciences | 9 | 12 |
| (c) Literature, Philosophy, and the Arts | 6 | 12 |
| (d) Communication: | | |
| Oral Communication | 2 | 2 |
| Written Communication | 3 | 6 |
| (e) Psychology | 3 | 6 |
| (f) Physical and Health Education: | | |
| Physical Education | 2 | 2 |
| Health Education | 2 | 2 |
| (g) Mathematics | 0 | 6 |
| (h) Foreign Languages | 0 | 6 |
| (i) Family Life Education | 0 | 6 |
| (j) Air Science and Tactics | 0 | 6 |
| **Total number of units required** | 45 | |

### EXPLANATION OF REQUIREMENTS

(a) **Social Sciences:** A minimum of nine or maximum of 12 units must be lected from general education courses with at least three units in two or more of e following fields: anthropology, economics, geography (except Geography 1), his- ry, political science, social science, sociology, and similar fields, including the required struction in United States history, Constitution, and American ideals. **NOTE:** urses in business, library science, philosophy, or psychology may not be used to tisfy the social science requirement.

(b) **Natural Sciences:** A minimum of nine or maximum of 12 units must be ected from general education courses in the natural sciences. At least one course not less than three units must be selected in the life sciences from biology, botany, ysiology, zoology, and similar fields; and at least one course of not less than three its in the physical sciences from astronomy, chemistry, Geography 1, geology, ysics, physical science, and similar fields. At least one unit of either physical or life ences or the three-hour equivalent must represent laboratory work. **NOTE:** Courses engineering, industrial arts, mathematics, or photography, may not be used to satisfy natural science or laboratory requirement.

(c) **Literature, Philosophy, and the Arts:** A minimum of six or maximum o 12 units must be selected from general education courses in literature, philosophy and the arts. At least one course of not less than three units must be selected i literature or in philosophy from courses in English, comparative literature, philosophy or similar fields. Courses in the arts must be selected from the fine arts, includin aesthetics, art, and music, or from the practical arts. A maximum of three units ma be counted in the practical arts toward general education.

(d) **Oral and Written Communication:** Two units must be completed in ora communication by passing Speech Arts 3. Students failing the Speech Interview ar required to register concurrently in Speech Arts 2, Oral Communication Laboratory for one unit of credit which may not be counted toward general education requirements

A minimum of three units, with a maximum of six units, must be selected fron courses in written communication. All students must complete three units in Englis 1. Students failing the English Test are required to complete English A for thre units as a prerequisite for other courses in English. English A may not be counted toward general education requirements.

(e) **Psychology:** Three units must be completed in Psychology 1. An additiona three units may be selected from other general education courses in psychology.

(f) **Physical Education and Health Education:** Two units must be completed in Health Education 21 and two units must be selected from general education courses in physical education.

The physical education requirement must be satisfied by completion of fou semesters of activity courses for a minimum and maximum of two units. **NOTE:** No more than one activity course may be counted within any semester and an activity course may not be repeated for credit, except courses designated as varsity sports.

(g) **Mathematics:** From zero to six units may be selected from general education courses in mathematics. Students failing the Mathematics Test must complete Mathematics X. This course may not be counted toward the general education requirements. **NOTE:** Any year-course in mathematics completed in high school may not be repeated in college for credit.

(h) **Foreign Languages:** From zero to six units may be selected from general education courses in foreign languages. **NOTE:** Year-courses in foreign languages completed in high school may not be repeated in college for credit, except that the last year-course in any foreign language sequence completed in high school may be repeated in college for a maximum of three units of repeated work to be applied toward graduation.

(i) **Family Life Education:** From zero to six units may be selected from general education courses in family life education. Courses in family life education may be found in the fields of business, health education, home economics, psychology, and sociology.

(j) **Air Science and Tactics:** Three units will be granted upon completion of the eight units given in the Basic Course and three units upon completion of the 12 units given in the Advanced Course. These six units correspond to the parts of the AFROTC program which lie in the areas of social science, natural science, communication, and other areas of the general education pattern; however, these units will not be included within the unit minima or maxima specified in any such area.

## COURSES IN GENERAL EDUCATION

Courses selected from the following groups may be counted toward the 45 units required in general education, unless the course is part of the student's major field and within the limitations indicated in the section on General Education Requirements. These courses are described in the section of the bulletin on Announcement of Courses. An asterisk (*) preceding the course number designates the course as a general education course. If additional general education courses are offered during the year, they will appear in the Class Schedule, designated as general education courses.

The courses listed below carry the number of units for the course in parentheses following the course title.

## SOCIAL SCIENCES

**Anthropology**
1A-1B—General Anthropology (3-3)
54—Social Anthropology (3)
152—World Ethnography (3)
165—Ethnology and Race Psychology (3)

**Economics**
1A-1B—Principles of Economics (3-3)
102—Comparative Economic Systems (3)
111—Economic History of U. S. (3)
115—Current Economic Problems (3)
131—Public Finance (3)
170—Government and Business (3)

**eography**
2—Introduction: Natural and Cultural Regions (3)
10—Economic Geography (3)
12A-12B—Culture Worlds (3-3)
145—Conservation of Natural Resources (3)

**istory**
4A-4B—Modern Europe (3-3)
8A-8B—The Americas (3-3)
17A-17B—American Civilization (3-3)
121A-121B—Medieval History (3-3)
172A-172B—Constitutional History of U. S. (3-3)
179A-179B—Intellectual History of the American People (3-3)

**Political Science**
1A-1B—Introduction to Government (3-3)
71A-71B—Introduction to American Government and Politics (3-3)
101—American Institutions (3)
105—American Political Thought (3)
111A-111B—Theory of the State (3-3)
137A-137B—Constitutional Government (3-3)
139A-139B—American Constitutional Development (3-3)
150A-150B—International Relations (3-3)

**Social Science**
40—Contemporary Problems (3)

**Sociology**
45—Marriage and the Family (3)
50—Contemporary Social Problems (3)
51—Principles of Sociology (3)
110—Race Relations (3)
135—Marriage and the Family (3)
145—Social Psychology (3)

## NATURAL SCIENCES

**Astronomy**
1—Descriptive Astronomy (3)
2—Modern Astronomy (3)
9—Practice in Observing (1)
101—Principles of Astronomy (3)
105—Historic Development of Astronomy (3)

**iology**
1—Survey of Biology (3)
3—Principles of Biology (3)
4—Plant and Animal Types (3)

**tany**
150—Readings in Biology (2)
160—Evolution (2)

**emistry**
2A-2B—Fundamentals of Chemistry (3-3)

**ography**
1—Introduction: Physical Elements (3)

**Geology**
2—General Geology (3)
3—General Geology Laboratory (1)
4—Physiography of U. S. (3)

**Oceanography**
100—The Oceans (2)

**Physical Science**
1—Introduction to Physical Science (3)
2—Introduction to Physical Science (3)
41—Man and His Physical World (3)
150—Readings in the Physical Sciences (2)

**Physics**
2A-2B—General Physics (3-3)
3A-3B—Physical Measurements (1-1)
5—Physics of the Home (4)
148—Introduction to Modern Physics (3)

**Zoology**
150—Readings in Biology (2)
160—Evolution (2)
165—Human Heredity (2)

## LITERATURE, PHILOSOPHY, AND THE ARTS

### Aesthetics
2—Introduction to Music (3)
5—Art Orientation (2)
50—Appreciation and History of Art (2)
51—Survey of Mexican Art (2)
102—Great Music (3)
138—Introduction to Aesthetic Appreciation (1)
150—Appreciation and History of Art (2)
162—History and Philosophy of the Dance (2)

### Art
6A—Design (2)
8—Costume and House Furnishings (2)

### Comparative Literature
52A-52B—Masterpieces of World Literature (3-3)
101A—Modern Continental Fiction (3)
104A-104B—Spanish American Literature (3-3)
115—Bible as Literature (3)
138—Introduction to Aesthetic Appreciation (1)
140A-140B—Masterpieces of French Literature (3)
142—The Golden Age of German Literature (3)
152A-152B—Survey of Drama (3-3)

### English
2A-2B Freshman Literature (3-3)
52A-52B—Masterpieces of World Literature (3-3)
101A—Modern Continental Fiction (3)
115—The Bible as Literature (3)
117A-117B—Shakespeare (3-3)
119A—English Romantic Poetry (3)
126B—Late 19th Century British Prose (3)
134—American Literature: 1910 to the Present (3)
149—The Study of Poetry (3)
152A-152B—Survey of Drama (3-3)

### Music
7A—Musicianship (3)
10A-B—Piano (1-1)
70A-B-C-D—Chamber Music (1-1-1-1)
75A-B-C-D—Symphony and Marching band (2-2-2-2)
80A-B-C-D—Symphony Orchestra (1-1-1-1)
85A-B-C-D—Chorus (1-1-1-1)
86A-B-C-D—Treble Clef (1-1-1-1)
87-A-B-C-D—Men's Glee Club (1-1-1-1)
88A-B-C-D—Workshop Chorus (½-½-½-½)
170A-B-C-D—Chamber Music (1-1-1-1)
175A-B-C-D—Symphony and Marching band (2-2-2-2)
180A-B-C-D—Symphony Orchestra (1-1-1-1)
185A-B-C-D—Chorus (1-1-1-1)
186A-B-C-D—Treble Clef (1-1-1-1)
187A-B-C-D—Men's Glee Club (1-1-1-1)
188A-B-C-D—Workshop Chorus (½-½-½-½)

### Philosophy
1A-1B—Introduction to Philosophy (3-3)
3A-3B—History of Philosophy (3-3)
101—Contemporary Philosophy (3)
129—Social Ethics (3)

### Practical Arts
Home Economics 5—Foods (3)
Home Economics 10—Clothing Fundamentals (3)
Industrial Arts 5—General Educatic Shop (3)
Industrial Arts 6—General Educatic Shop (3)
Library Science 10—Use of the Library (2)
Industrial Arts 85—Introduction to Photography (3)

## COMMUNICATION

### Oral Communication
Speech Arts 3—Oral communication (2)

### Written Communication
English
1—Freshman Composition (3)
61—Sophomore Composition (3)
106—Creative Writing (3)

## PSYCHOLOGY

### Psychology
1—General
106—Developmental Psychology (3)
145—Social Psychology (3)

## HEALTH EDUCATION—PHYSICAL EDUCATION

### Health Education

21—Principles of Healthful Living (2)

### Physical Education (Women)

1A-B—Fundamental Skills (½-½)
2A-B—Folk Dancing (½-½)
3A-B—Modern Dance (½-½)
4—Fieldball, Soccer, Speedball (½)
5—Softball, Volleyball, Hockey (½)
6—Basketball (½)
11A-B—Ballroom Dancing (½-½)
12A-B—Advanced Modern Dance (1-1)
13A-B—Archery (½)
14A-B—Badminton (½-½)
16A-B—Golf (½-½)
18A-B-C—Tennis (½-½-½)
19A-B—Bowling (½-½)
20A-B—Swimming (½-½)
21—Life Saving (1)
23—Sailing (½)
24—Hiking (½)

### Physical Education (Men)

1A-B-C-D—Individual Adaptation (½-½-½-½)
2—Basketball (½)
2A-B—Folk Dancing (½-½)
3—Boxing (½)
3A-B—Modern Dance (½-½)
4—Gymnastics (½)
5—Soccer (½)
6—Softball (½)
7—Touch Football (½)
8—Track and Field (½)
9—Volleyball (½)
10—Wrestling (½)
11A-B—Ballroom Dancing (½-½)
13—Archery (½)
14—Badminton (½)
15—Fencing (½)
16—Golf (½)
17—Handball (½)
18—Tennis (½)
19—Bowling (½)
20-A-B—Swimming (½-½)
21—Life Saving (1)
23—Sailing (½)
24—Hiking (½)

## FOREIGN LANGUAGES

### rench

1—Elementary (3)
2—Elementary (3)
3—Intermediate (3)
4—Intermediate (3)
15—French Civilization (2)
16—French Civilization (2)
115—French Civilization (2)
116—French Civilization (2)

### erman

1—Elementary (3)
2—Elementary (3)
3—Intermediate (3)
4—Intermediate (3)
15—German Civilization (2)
16—German Civilization (2)
115—German Civilization (2)
116—German Civilization (2)

### Latin

1—Elementary (3)
2—Elementary (3)
3—Intermediate (3)
4—Intermediate (3)

### Spanish

1—Elementary (3)
2—Elementary (3)
3—Intermediate (3)
4—Intermediate (3)
15—Spanish Civilization (2)
16—Spanish Civilization (2)
115—Spanish Civilization (2)
116—Spanish Civilization (2)

## MATHEMATICS

### Mathematics

- B—Plane Geometry (3)
- G—Mathematics for General Education (3)
- 7A-7B—Mathematical Analysis (3-3)
- 104—History of Mathematics (3)

## AIR SCIENCE AND TACTICS

### Air Science and Tactics

- Completion of the Basic Course (3)
- Completion of the Advanced Course (3)

## FAMILY LIFE EDUCATION

### Family Life Education

- Business 20—Consumer Problems (3
- Health Education 90—Physiology o
  Reproduction (1)
- Home Economics 1—General Home
  Arts (3)
- Home Economics 5—Foods (3)
- Home Economics 10—Clothing Fundamentals (3)
- Home Economics 135—Marriage and the Family (3)
- Home Economics 150—Home Management (3)
- Home Economics 170—Child Care an
  Development (3)
- Psychology 106—Developmental Psychology (3)
- Sociology 45—Marriage and the Family (3)
- Sociology 135—Marriage and the Family (3)

# BACHELOR OF ARTS DEGREE IN ARTS AND SCIENCES

## MAJOR REQUIREMENTS

One major field is required for the A.B. degree in addition to 45 units in general education courses. At least 40 units of the 124 required for graduation must be in courses carrying upper division credit.

The major in arts and sciences consists of a minimum of 24 upper division units with prerequisite and related lower division courses as prescribed by the department offering the major. The occupational major consists of a minimum of 36 upper division units with prerequisite and related lower division courses as prescribed by the department offering the major.

### Majors

Majors in Arts and Sciences are offered in the following fields:

- Art
- Bacteriology
- Botany
- Chemistry
- Economics
- English
- French
- Geography
- History
- Industrial Arts
- Journalism
- Language Arts
- Life Science
- Mathematics
- Music
- Physical Education
- Physical Science
- Physics
- Political Science
- Psychology
- Romance Languages
- Social Science
- Sociology
- Spanish
- Speech Arts
- Zoology

Occupational majors are offered in the following fields:

- Personnel Management
- Public Personnel Management
- Public Administration
- Recreation
- Social Service

### The General Major

Occupational curricula are also offered under the general major in the following elds: Home Arts, Inter-American Relations, and Prelegal. Students not electing one f these curricula who need a general type of training for other vocational objectives must consult with the Dean of Instruction before permission may be granted to follow he pattern for the general major.

In addition to the general education requirements, a student taking the general major must complete 36 upper division units chosen from three fields with not more han 15 units nor fewer than nine units from any one field. A minimum of a year-course n each field must be completed in the lower division as foundation for upper division work in the general major. A minor is not required; however, four additional upper ivision elective units must be completed to meet the minimum requirement of 40 upper ivision units for graduation.

All students following the pattern for the general major must obtain forms from he Office of the Dean of Instruction, complete the forms, and have the general major pproved by the Dean of Instruction. The forms will then be submitted by the student o the chairman of each of the three departments comprising the general major for pproval, revision, or rejection.

## MINOR REQUIREMENTS

A minor in arts and sciences may be required by the department offering the ajor. In departments not requiring a minor, the minor is optional with the student. minor generally consists of a minimum of 15 units, or maximum of 22, six to nine nits of which must be in courses carrying upper division credit as specified by the epartment. A few minors may exceed the 22 unit maximum. The minor may include ourses which are also included in the general education requirements.

## Minors

Minors in Arts and Sciences are offered in the following fields:

- Air Science
- Anthropology
- Art
- Astronomy
- Bacteriology
- Botany
- Business
- Chemistry
- Comparative Literature
- Economics
- Education
- Engineering
- English
- French
- Geography
- Geology
- German
- Health Education
- History
- Home Economics
- Industrial Arts
- Journalism
- Life Science
- Mathematics
- Music
- Philosophy
- Physical Education
- Physical Science
- Physics
- Political Science
- Psychology
- Public Administration
- Recreation
- Secretarial Management
- Sociology
- Spanish
- Speech Arts
- Zoology

# BACHELOR OF SCIENCE DEGREE IN ARTS AND SCIENCES

## REQUIREMENTS FOR THE MAJOR

One major field is required for the B.S. degree in addition to 45 units in general education courses. A minimum of 128 units is required for graduation. A minor field is not required.

The major consists of a minimum of 36 upper division units with prerequisites and related courses in the lower division as prescribed by the department offering the major. These lower division courses are considered part of the major and may not be counted toward the 45 units in general education, except as may be specified in each major field.

### Majors

Majors in Arts and Sciences are offered in the following fields:

- Bacteriology
- Botany
- Chemistry
- Engineering
- Life Science
- Physics
- Zoology

Occupational majors are offered in the following fields:

- Accounting
- Banking and Finance
- Business Management
- Credit Management
- General Business
- Insurance
- Laboratory Technique
- Marketing
- Office Management
- Secretarial Management

# PROFESSIONAL CURRICULA IN TEACHER EDUCATION

## ADMISSION TO TEACHER EDUCATION

Students who plan to earn credentials for teaching or other school service should apply for admission to teacher education during either the second semester of the freshman year or the first semester of the sophomore year. Students entering the college at the end of the sophomore year will apply at the beginning of the junior year. No courses in education may be taken until admission is granted; any exception to this rule must have the approval of the Chairman of the Education Department. The standards for admission to Teacher Education are different from those for admission to the college; therefore, admission to the college does not guarantee that the student will be admitted to teacher education. The committee on admission to teacher education will base its decision upon the following factors:

1. A satisfactory score on the college aptitude test taken at the college.
2. Competence in the use of English and satisfactory ability in arithmetic, handwriting, reading and spelling as indicated by scores on fundamentals tests. (See college calendar for dates of these tests which should be taken in the second semester of the freshman year.)
3. Satisfactory scores on the General Culture Test in the case of candidates for junior high school, special secondary, general secondary, or school psychometrist credentials. (See college calendar for dates of this test, which should be taken in the second semester of the sophomore year.)
4. Quality of speech habits and voice control as indicated by the satisfactory completion of a speech test given at the college or satisfactory completion of a course in corrective speech.
5. Results of the college health examination given for teaching credential candidates.
6. Interviews with representatives of the Admissions Committee and with a representative of the department in which the student is a major. The interviewing committee will base its evaluation upon the following factors established by the State Board of Education: intelligence, scholarship, professional aptitude, personality and character, speech and language usage, and many-sided interests.
7. Satisfactory grade point averages of the first two years or more of a given curriculum or its equivalent and of all subsequent work taken for the credential. Minimum grade point averages are indicated below:
   a. Elementary, Kindergarten-Primary, Special Secondary credentials, 1.2.
   b. General Secondary credential: all subjects, 1.5, and major field, 1.75.
   c. Junior High School and School Psychometrist credentials, 1.5.
8. For administration and supervision credential candidates, a satisfactory grade point average (minimum 1.75) on all work applicable to that credential, exclusive of the work applied to the basic credential.
9. For general secondary credential candidates, an official evaluation and program approved by the authorized departmental representative in the student's major field and by a representative in secondary education.

### Transfer Students

Students who have completed two or more semesters of work in another college, upon transferring to San Diego State College, should make application for admission to teacher education as soon as they enroll in the college. Transfer students admitted to the college with either upper division or graduate standing must take the necessary tests for admission to teacher education given during the testing and advising program before the beginning of their first semester at the college. (See college calendar for dates.)

### Transfer Students With Emergency Credentials in Elementary Education

Certain adaptations in the education courses have been made to meet the needs of experienced teachers who hold an emergency credential in elementary education. See the Coordinator of Elementary Education for details.

### Advanced Standing in Teacher Education

A student transferring into San Diego State College with advanced standing must complete a minimum of six units of professional education work in residence at San Diego State College before recommendation for a credential, regardless of extent of education work already completed elsewhere. Whenever a transfer student has had teaching experience, the college requires that a statement from the employer(s) be filed with the Evaluations Office.

### Evaluation of Credits

After an interval of five years, courses in education are re-evaluated and subject to reduction in credit, in light of such new requirements as may have been put into effect and changes in educational procedures. Students formerly in attendance will not be considered to be working in the curriculum until an evaluation and statement of credit has been secured from the Evaluations Office. All courses taken either at this college or elsewhere must be approved by an official adviser in order to be credited toward meeting credential requirements or pattern requirements for a degree.

## TEACHING CREDENTIALS

San Diego State College is authorized by the State of California to recommend students for the teaching credentials listed below. To be recommended, students must complete, or have completed, the bachelor's degree in one of the curricula offered for teachers.

| *The credential* | *Subjects and grades for which it is valid* |
|---|---|
| General Elementary | All grades through the eighth. |
| Kindergarten-Primary | Kindergarten through third. |
| General Junior High (must be taken with a minor in industrial arts or home economics, or with another credential) A special program is offered in combination with the General Elementary Credential | All subjects in grades seven, eight, and nine in all elementary or secondary schools. |
| General Secondary | All subjects in the public schools in grade 7 and above. |
| Health and Development | Authorizes to serve as supervisor of health in the capacity of school nurse. |
| Special Secondary in Art | Art in all grades of the public schools. |
| Special Secondary in Business Education | Business education subjects in all grades of the public schools. |
| Special Secondary in Music | Music in all grades of the public schools. |
| Special Secondary in Physical Education | Physical education in all grades of the public schools. |
| Special Secondary in Speech Arts | Speech in all grades of the public schools. |
| Special Secondary in Correction of Speech Defects | Correction of speech defects in all grades of the public schools. |
| Special Secondary for teaching the Mentally Retarded Child | To teach mentally retarded children in elementary and secondary schools. |

| | |
|---|---|
| **School Psychologist** | **To serve as school psychologist.** |
| **School Psychometrist** | **To serve as assistant to the school psychologist.** |
| **Administration in Elementary Education** | **Authorizes for credential to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in elementary schools.** |
| **Supervision in Elementary Education** | **Authorizes for credential to supervise instruction in elementary schools.** |
| **Administration in Secondary Education** | **Authorizes for credential to serve as superintendent, deputy superintendent, assistant superintendent, principal, vice principal, and supervisor of instruction in secondary schools.** |
| **Supervision in Secondary Education** | **Authorizes for credential to supervise instruction in secondary schools.** |
| **Special Subject Supervision** | **Supervision in the special subject in all grades.** |

### Application Pending

| | |
|---|---|
| Special Secondary in Industrial Arts | Industrial Arts in all grades of the public schools. Application for this credential is being made during the school year 1953-54. Potential candidates for this credential may obtain information from the chairman of the Industrial Arts Department. |

## COMBINATION OF CREDENTIALS

Students who seek more than one teaching credential must complete in full the curriculum for each, with only such exceptions as are indicated in the statement of requirements.

A combination of the elementary school credential and the junior high school credential may be secured by completing the requirements for the elementary school credential and the following additional requirements.

(a) A junior high school teaching major.
(b) Education 100B in the major field or equivalent elementary education course.
(c) Three units of directed teaching, or equivalent, in a junior high school.
(d) Education 115B or 184A.

A combined program leading to the junior high and general elementary credentials is available. Entering students interested in such a program should request an adviser for the general junior high credential.

A combination of the junior high school credential and a special secondary credential may be secured by completing the requirements for the special secondary credential and the following additional requirements:

(a) A junior high school teaching major, excluding the special secondary credential majors, and a teaching minor. This minor may be the special secondary field.
(b) Education 100B in the junior high school teaching major.
(c) Three units of student teaching in the junior high school teaching major.

The general elementary credential and the special secondary credential in the Correction of Speech Defects may be combined by (1) completing a speech minor, (2) directed teaching in speech correction, and (3) completing additional upper division requirements in speech, education, and psychology.

## GENERAL ELEMENTARY AND KINDERGARTEN-PRIMARY CREDENTIALS WITH THE BACHELOR OF ARTS DEGREE

The general elementary and kindergarten-primary credentials are granted with the A.B. degree in teacher education. One major in Education, in addition to 45 within general education courses, and one teaching minor are required for either credentials and the degree. Curricular outlines for these credentials may be obtained from the Coordinator of Elementary Education.

Summary of unit requirements:

| | *Units* |
|---|---|
| General education | 45 |
| Major in education | 39–42 |
| Additional units, including minor and pattern requirements for the credential | 40–41 |
| Total number of units required for graduation | 124 |

### Major for the General Elementary Credential

The major consists of 39 upper division units to include the following courses: Education 102A-102B (6 units); Education 147 (10 units); Education 148 (12 units); Education 115A (2 units); Education 116 (7 units); and Health Education 151 (2 units).

Lower division background courses for the credential include: Social science to include regional geography (9 units); natural science to include physical geography (12 units); literature, philosophy, and the arts to include courses in music fundamentals, music methods, arts and crafts, and design (12-15 units); physical education to include games and activities for the elementary school (2½ units).

### Major for the Kindergarten-Primary Credential

The major consists of 43 upper division units to include the following courses: Education 102A-102B (6 units); Education 147 (10 units); Education 148 (12 units); Education 116 (7 units); Education 146 (4 units); Education 115A (2 units); and Health Education 151 (2 units).

Lower division background courses for the credential include: Social science (9 units); natural science (12 units); literature, philosophy, and the arts to include courses in music fundamentals, music methods, piano, arts and crafts, and design (13-15 units); physical education to include games and activities for the elementary school (2½ units).

### Minor

A teaching minor for the general elementary and kindergarten-primary credentials consists of a minimum of 15 units in one field, six units of which must be in courses carrying upper division credit. Minors are offered in the following fields.

- English
- Foreign Languages
- General Science
- Industrial Arts
- Mathematics
- Physical Education
- Social Science
- Speech Arts (creative or speech correction)

The *minor in English* must include three units in American literature.

The *minor in foreign languages* may be in one or more of the foreign language fields.

The *minor in general science* shall consist of laboratory courses in Biology 3 and 4 or approved equivalents, and Physical Science 1 and 2 or equivalents, plus six upper division units chosen from Botany 119 or 150, Industrial Arts 185 or 186, Physics 148, Zoology 119, 160, or 165.

The *minors in industrial arts, mathematics, and physical education* are the same as the arts and sciences minors described under the respective departments.

The *minor in social science* must include six upper division units in history or six upper division units in geography and further work in either lower or upper division selected from anthropology, economics, geography, history, political science, or sociology.

The *minor in speech arts* (creative) is the same as the arts and sciences minor described under the department. This minor is open to students in the general elementary or the kindergarten-primary credential curriculum. The minor in speech

oe planned and approved by the education adviser for the speech correction mu ential and may be used only as part of the general elementary credential correction c
curricu second minor, though not required, may be chosen from art, health education, e economics, music, or recreation.

Students taking the general elementary or kindergarten-primary credential in combination with a special secondary credential may use the special secondary major for the minor in the elementary or kindergarten-primary fields.

## GENERAL JUNIOR HIGH SCHOOL CREDENTIAL WITH THE BACHELOR OF ARTS DEGREE

The general junior high school credential is offered to students with minors in home economics or industrial arts or to students who wish to take this credential in combination with a general elementary, kindergarten-primary, or special secondary credential. The general junior high school credential is granted with the A.B. degree in teacher education.

One teaching major and one teaching minor, in addition to 45 units in general education courses, are required of all students taking this credential. Students not taking this credential in combination with another credential are required to complete 24 units in professional education courses and a minor in home economics or industrial arts. Students taking this credential in combination with another credential should refer to the section of the bulletin entitled: Combination of Credentials.

### Teaching Majors and Minors

Teaching majors and teaching minors are offered in the following fields:

| *Teaching Majors* | *Teaching Minors* |
|---|---|
| English | Home Economics |
| Foreign Languages | Industrial Arts |
| General Science | or |
| Mathematics | The special secondary field major when the combination credentials are earned |
| Social Science | |

Summary of unit requirements:

| | *Units* |
|---|---|
| General education | 45 |
| Teaching major (minimum requirements) | 24 |
| Teaching minor | 15 |
| Professional courses in education | 24 |
| Electives | 16 |
| Total number of units required for graduation | 124 |

### Teaching Major

A *teaching major* consists of 24 to 33 units as specified below. Courses in the major are in addition to the 45 units required in general education courses, unless otherwise indicated.

A *teaching major in English* shall consist of six units in a lower division year-course, and 18 units in English courses carrying upper division credit, including three units in American literature and three units in Shakespeare. Recommended as part of the major: English 192.

A *teaching major in foreign languages* may include one or more of the foreign languages for a minimum of 24 units, 18 units of which must be in courses carrying upper division credit.

A *teaching major in general science* shall consist of a minimum of 33 units, at least 12 units of which must be in courses carrying upper division credit. Nine units may be applied toward general education requirements. The lower division courses must cover all of the following areas of science: astronomy, botany, chemistry, geology, physics, and zoology. Lower division minimum requirements: Biology 3 and 4, and Physical Science 1 and 2, or equivalent courses. Upper division requirements: Botany

119 or Zoology 119, and Physical Science 150 or Physics 148, plu t least one more course in each of life and physical sciences for a minimum of 12 upp division units. These elective courses, Industrial Arts 85, Physics 22, Physiology 1 oology 20, Botany 150, Industrial Arts 185, Zoology 160 and 165 and the alternate ses in upper division above are available to students who take only the minimu wer division courses. Electives may be used to complete the required minimum of 33 A student electing this major must have one year each of high school algebra a geometry, or equivalent.

A *teaching major in mathematics* shall consist of a minimum of 24 units, at least 18 units of which must be in courses carrying upper division credit.

A *teaching major in social science* shall consist of a minimum of 24 units, at least 18 units of which must be in courses carrying upper division credit. There shall be a concentration of 12 units, at least six units of which must be in courses carrying upper division credit, selected from one of the following fields: anthropology, economics, geography, history, political science, or sociology. A year-course in American history must be included in the lower or upper division.

### Teaching Minors

A *teaching minor* consists of a minimum of 15 units, six units of which must be in courses carrying upper division credit. Teaching minors are offered in home economics or industrial arts.

A *teaching minor in home economics* consists of a minimum of 15 units to include Home Economics 5 or 62 and 10 or 11 in the lower division; and Home Economics 150 and 170 in the upper division. Three additional units should be chosen in consultation with the adviser in home economics.

A *teaching minor in industrial arts* consists of a minimum of 15 units, six units of which must be in courses carrying upper division credit. Required: Industrial Arts 21 and 122A, and at least one lower division and one upper division course in two of the following areas: general woodworking, general metalworking, electricity and radio, transportation, and graphic arts.

### Professional Courses in Education

Professional courses include 24 units in the following: Education 184A-184B-184C, 100B (methods in the major and minor fields), 116; plus Health Education 151.

## SPECIAL SECONDARY SCHOOL CREDENTIAL WITH THE BACHELOR OF ARTS DEGREE

The special secondary school credential is granted with the A.B. degree in teacher education in the following fields: art, business education, music, physical education, and speech arts. Majors in these fields are in addition to 45 units in general education courses. Professional courses in education are also required. Certain of these credentials require, in addition, a teaching minor in an academic field. For a statement of requirements in the major and in professional education, refer to the credentials below.

Summary of unit requirements:

| | *Units* |
|---|---|
| General education | 45 |
| Major for the credential | 39–58 |
| Professional courses in education | 22–26 |
| Minor, if required, and electives | 0–18 |
| Total number of units required for graduation | 124 |

### TEACHING MINORS FOR THE SPECIAL SECONDARY CREDENTIAL

A teaching minor is required for the special secondary credential in men's physical education. A minor is optional for the other special secondary credentials. The minor consists of a minimum of 15 units, or maximum of 22, six units of which must be in courses carrying upper division credit, except for the general science minor sical science and general science. Courses in the minor may include selected from general education courses. Teaching minors are offered in the following fields:

English
Foreign languages
General science
Health education
Home economics
Industrial arts
Mathematics
Social science

The teaching minors include certain requirements:

*English:* Nine upper division units in English are required, including three units in American literature. Students who plan later to secure a general secondary credential with a minor in English must follow the program outlined under the general secondary credential.

*Foreign languages:* The minor must be in one foreign language field.

*General science:* Courses in the minor are to be selected from either of the following two general secondary credential minors: (1) life science and general science, (2) physical science and general science.

*Health education:* The minor must include Health Education 65, 90, 152, 145 or 153, 199, and Physical Education 151.

*Home economics:* The minor must include Home Economics 5 or 62, and 10 or 11 in the lower division; and Home Economics 150 and 170 in the upper division. Three additional units should be chosen in consultation with the adviser in home economics.

*Industrial arts:* The minor must include Industrial Arts 21 and 122A and one lower division and one upper division course in each of two of the following areas: general woodworking, general metalworking, electricity and radio, transportation, and graphic arts; and electives to make a total of nine upper division units.

*Mathematics:* See general statement above.

*Social science:* The minor must include courses selected from anthropology, economics, geography, history, political science, or sociology. Six units must be in a year-course sequence and six units are required in American history or three units in American history and three units in political science.

## SPECIAL SECONDARY CREDENTIAL IN ART

Courses in the major are in addition to 45 units of general education courses.

The teaching major in art for the special secondary ceredential consists of 44-46 units to include the following courses: Lower division: in general education: Aesthetics 5 or 51 and 50 (4 units); in the major: Art A (or high school equivalent), Art B, 6A-6B, 14A, 61A-61B, and six to eight units of art electives (20-22 units). Upper division: Aesthetics 150, Art 106A, 112A, 116A, 119A, 194A, 195A, Speech Arts 140A, and five units of art electives (22 units).

Professional courses in education consist of 22 upper division units to include the following courses: Education 184A-184B-184C, 116, 119, and 100B-A. Health Education 151 (2 units) is also required.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors above.

## SPECIAL SECONDARY CREDENTIAL IN BUSINESS EDUCATION

Courses in the major are in addition to 45 units of general education courses. The major in business education must include the following courses: Lower division: Economics 1A-1B and Business 20 (these courses may be counted as part of general education requirements); Business 1B, 8, 14A-14B, 18A, 25; and the requirements in *two* of the subfields listed below, of which *accounting* or *secretarial* must be one. Recommended: Geography 10.

Subfields:

*Accounting:* Select three units from Business 2, 21, 24, or 27.
*Business Management:* Business 18B.
*Merchandising:* Business 24.
*Secretarial:* Business 5B. (If satisfied, select three units from Business 2, 21, 24, or 27.)

Upper division: Business 105A-105B, 108, 121, 190; and the requirements in *two* of the subfields listed below, of which *accounting* or *secretarial* must be one. The two fields selected in the lower division must be continued in the upper division. Subfields:

*Accounting:* Select six units from Business 160A, 160B, 161A, or 164A.

*Business Management:* Select six units from Economics 140, Business 103A, 125, 133, 154 or 184.

*Merchandising:* Select seven units from Business 123, 185, 187A, 187B, 186, or Art 107.

*Secretarial:* Business 113A-113B.

Professional courses in education consist of 22 upper division units to include the following courses: Education 184A-184B-184C, 116, 100B-T, and one of the following: Education 100B-B, 100B-ME, or 100B-S. Health Education 151 (2 units) is also required.

In addition to the requirements stated above, the student must present satisfactory evidence of one-half year, or 1,000 hours of approved experience in the field named in the credential.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors above.

## SPECIAL SECONDARY CREDENTIAL IN MUSIC

Students planning to work for the special secondary credential in music should consult with the chairman of the Music Department before registering and plan their course in view of individual variations in background and needs.

General basic requirements for the credential are as follows:

1. Demonstration of proficiency in vocal or instrumental *performance* comparable to a level of difficulty of the Bach two-part inventions or the easier Haydn sonatas for the piano before admission to the major may be granted.
2. Selection of a major instrument or of voice before admission to the major program and demonstration of *performance ability* developed through class or individual instruction after admission to the program.
3. Appearance as a soloist in at least one student recital during each semester in residence, after completion of two semesters of college work.
4. Competence in elementary keyboard technique. (The student's attention is directed to the Music 10A-B-C-D requirement.)
5. As laboratory experience participation in two activities *each* semester, beginning with the first year and continuing until the student has completed 14 units of activities. (During the semesters when the student is in the directed teaching program, one activity each semester is required.)
6. Before recommendation for admission to directed teaching will be granted, credential candidates must have completed all lower division courses in beginning class study of orchestral instruments and voice, Music 146A-146B, and must have passed the minimum state credential requirements in voice and piano, with or without credit, which are as follows:

(a) Piano: Ability (1) to play a Bach two-part invention; (2) to play an artistic accompaniment; (3) to play at sight four-part hymns.

(b) Voice: Ability (1) to sing at least one song representative of each of the following periods of vocal literature: Classic, Romantic, Modern; (2) to sing at sight any part of a four-part hymn.

Students whose background in piano is inadequate for these requirements must register in their first semester for appropriate private or class instruction, with or without credit. Students with insufficient background in voice must register for voice instruction no later than the third semester.

### Specific Requirements for the Major

Courses in the major are in addition to 45 units of general education courses, xcept that nine units of music activity courses may be counted in general education toward degree requirements in the area of literature, philosophy, and the arts.

*Lower division requirements:* Music 9A-9B, 10A-10B-10C-10D (may be omitted in part or in full upon evidence of satisfactory piano technique), 15A-15B, 52A- 52B, 59A-59B; two units selected from 20A-20B, 25A-25B, 30A-30B, and 35; and eight units of music activity courses selected from courses numbered 70 to 87 (see general basic requirements above). Total: 37 lower division units.

*Upper division requirements:* Music 109A, 146A-146B-146C; five units selected from 120A-120B, 125A-125B, 130A-130B, and 135; four units selected from 111, 112, 116, 117, 121, 122, 126, 127, 131, 132, 150A-150B-150C-150D; six units of music activity courses selected from courses numbered 170 to 187; and four units of upper division electives selected from the areas of applied music, music history and literature, and composition and instrumentation. Total: 24 upper division units.

### Professional Courses in Teacher Education

Professional courses in education consist of 24 upper division units to include the following courses: Education 184A-184B-184C, 116, 117A, 145A, and 100B-Mu. Health Education 151 (2 units) is also required.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field selected from the teaching minors for the general secondary credential.

## SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (MEN)

Courses in the major are in addition to 45 units of general education courses.

The major in physical education consists of 42 units to include the following: Lower division: Physical Education 53, 63, 64, 72, Health Education 65 (11 units); and Physiology 1A and Zoology 8 (6 units). Upper division: Physical Education 141, 142, 145, 146, 151, 155, 168, 170A or 170B, 177, 190, and two units of physical education electives (25 units).

Professional courses in education consist of 22 upper division units to include the following courses: Education 184A-184B-184C, 116, 100B-PE, and 100B in the minor field. Health Education 151 (2 units) is also required.

A teaching minor is required. Refer to the teaching minors for the special secondary credential listed above.

## SPECIAL SECONDARY CREDENTIAL IN PHYSICAL EDUCATION (WOMEN)

Courses in the major are in addition to 45 units of general education courses.

The major in physical education consists of 41½ units, including general education courses in physical education. Lower division: Physical Education 1A, 2A, 2B, 3A, 3B, 4, 5, 6, 13A, 53, and 72; and Physiology 1A or Zoology 20; and Zoology 8. (14½ units.) Upper division: Physical Education 151, 155, 156A, 156B, 160, 161, 164A, 164B, 168, 170B, 185, and 190. (27 units.) A minor is not required; however, a teaching minor selected from the general secondary teaching minors is strongly recommended.

Professional courses in education consist of 20 upper division units to include the following courses: Education 184A-184B-184C, 116, and 100B-PE. Health Education 151 (2 units) is also required.

## SPECIAL SECONDARY CREDENTIAL IN SPEECH ARTS

Courses in the major are in addition to 45 units of general education courses.

The major in speech arts consists of 45 units to include the following: Lower division: Speech Arts 4, 11A, 55A or 55B, 56A, 60A, 81 and three units in speech electives (21 units). Upper division: Speech Arts 150, 159, 176 or 179A; three units selected from 162, 191, or 192A; nine units selected from 108, 118, 140, 154A, 154B, 155, 182, or 183; and three units selected from upper division courses in English literature.

Professional courses in education consist of 20 upper division units to include the following courses: Education 184A-184B-184C, 116, and 100B-SA. Health Education 151 (2 units) is also required.

A teaching minor is not required, but students are urged to complete a minor and the methods course (Ed. 100B) in an academic field. Refer to the teaching minors for the special secondary credential listed above.

## SPECIAL SECONDARY CREDENTIAL IN CORRECTION OF SPEECH DEFECTS

This credential is granted only to students who can verify two years of successful eaching experience or four semester hours of superior student teaching completed in an approved teacher education institution and who hold a valid California teacher ertificate, credential, or life diploma of elementary or secondary grade. (In other words, this credential accompanies a special secondary, general secondary, or general elementary credential.) Students must show credit in the following subjects, or their equivalents:

| | Units |
|---|---|
| *Lower Division* | |
| Psychology 1 and Oral Communication | 5 |
| *Upper Division* | |
| Speech Arts 150, Phonetics | 3 |
| Speech Arts 176, Articulatory Problems | 3 |
| Speech Arts 179A-179B, Nervous Speech Disorders | 6 |
| Psychology 131, Foundations of Personality | 2 |
| Education 181, Exceptional Children | 3 |
| Education 102A, or 102D or 184C | 2-4 |
| Psychology 151, Introduction to Clinical Appraisal | 3 |
| Education 155, 230 or Psychology 152 | 3 |
| Education 116 or 316, 88 hours of supervised speech correction | 3 |
| Total | 33-35 |

## SPECIAL SECONDARY CREDENTIAL FOR TEACHING THE MENTALLY RETARDED CHILD

An applicant for the special secondary credential for teaching the mentally retarded child must have completed the following minimum requirements:

1. Possession of a valid kindergarten-primary, general elementary, junior high school, or general secondary credential.
2. Completion of 18 semester hours of professional work selected from the following fields:
    a. Required group: Education 102B, 102C or 184B; 181; 182 or 185; Art 61A or 161A; and three units of directed teaching of the mentally retarded.
    b. Additional work to complete the required total of 18 semester hours selected from any of the following electives: Education 176, 144, Psychology 132, 150, or 151.
3. The 18-unit requirement will be reduced 4 units for each year of verified, successful experience in teaching special classes for mentally retarded children, the total reduction not to exceed 12 units.
4. At least six semester units of the 18 required must have been completed within five years of the time application is made for the credential.
5. Twelve units of work must have been completed at this college.

## HEALTH AND DEVELOPMENT CREDENTIAL

This credential is offered for school nurses only. Requirements for this credential include:

1. Possession of a valid license issued by the official California State board or agency in charge of this profession in California.
2. Possession of the Public Health Nurse certificate.
3. The completion of six semester units of work including courses in:
    a. Educational Psychology (Education 130)
    b. Administration of the School Health Program (Health Education 153)
    c. Social case work, or rural education, or child hygiene (Health Education 151)

Pattern of work to be approved by adviser appointed by the Chairman of the Department of Education.

## SCHOOL PSYCHOLOGIST CREDENTIAL

Each applicant for recommendation for the school psychologist credential shal have completed the following minimum requirements:

1. Possession of a valid general elementary or general secondary credential.
2. One year of successful teaching experience.
3. Possession of a master's degree in psychology or educational psychology.
4. Each applicant must complete the following course requirements:

A. Child development, mental hygiene, and counseling and guidance, including interviewing:

| | *Units* |
|---|---|
| Education 102B, Child Growth and Development, or Psychology 106, Development Psychology | 3 |
| Psychology 132, Personality Adjustment | 2 |
| Psychology 152, Introduction to Methods of Counseling or Education 233, Guidance Counseling Techniques | 3 |

B. Psychology and education of exceptional children, social case practice including field work and clinical psychology:

| | |
|---|---|
| Education 181, Exceptional Children | 3 |
| Sociology 230, Principles of Social Case Work | 3 |
| Psychology 151, Introduction to Clinical Appraisal or Psychology 211, Advanced Clinical Psychology | 3 |

C. Educational psychology and educational measurements including field work and elementary statistics:

| | |
|---|---|
| Psychology 130, Educational Psychology | 2 |
| Education 102A, Measurement and Evaluation in Elementary Education, Education 102D, Measurement and Evaluation in Secondary Education, or Education 184C, The Teaching Process | 2-4 |
| Psychology 104A, Statistical Methods in Psychology | 3 |

D. Individual and group mental tests including field work:

| | |
|---|---|
| Psychology 105A, Introduction to Psychological Testing | 3 |
| Psychology 105B, Individual Mental Testing | 3 |
| Psychology 205, Advanced Mental Testing | 3 |

E. Remedial instruction including laboratory or classroom practice:

| | |
|---|---|
| Education 144, Diagnosis and Remedial Treatment of Difficulties in Reading | 3 |
| Education 176, Problems of Speech Correction and Articulation or Education, 179A, Nervous Speech Disorders | 3 |

These courses include laboratory practice.

## SCHOOL PSYCHOMETRIST CREDENTIAL

An applicant for the school psychometrist credential must have completed the following requirements:

1. Possession of a California general teaching credential (General Elementary, Junior High School, or General Secondary) or a four-year college course with a bachelor's degree.

2. Admission to teacher education by all undergraduate students or by graduate students who do not hold a California teaching credential. Courses in the Department of Education will not be open to students who are not admitted to teacher education. A special examining committee of members of both the Departments of Education and Psychology is established to interview applicants.

3. As a part of the undergraduate or graduate program the applicant must have completed 18 semester units of training distributed approximately as follows and approved by the credential adviser:

A. At least six units selected from the following areas with one course in each area: (1) Education 102A or 102D or 184C; (2) Education 102B or 102C; (3) Education 130. Education 184B will meet requirements in both area 2 and 3.

B. Six units as follows: Education 181 and Psychology 151.

C. Six units as follows: Psychology 105A and Psychology 105B.

# CURRICULA LEADING TO THE GENERAL SECONDARY SCHOOL CREDENTIAL

## INFORMATION CONCERNING THE GENERAL SECONDARY SCHOOL CREDENTIAL

A candidate for this credential must complete the requirements for the bachelor's degree from an accredited institution with a major and a minor commonly taught in the secondary schools of California. Admission to candidacy for this credential should be sought during the second semester of the sophomore year or immediately upon admission to San Diego State College with advanced or graduate status. For admission requirements, refer to the section entitled: Admission to Teacher Education.

Students desiring a major for which San Diego State College is authorized should complete a program leading to the A.B. or B.S. degree at the end of four years and the General Secondary Credential upon completion of the graduate year requirements outlined on the following pages.

Students desiring a major in art, business education, music, physical education or speech arts may complete the requirements for the special secondary credential simultaneously with the bachelor's degree; then continue with the graduate program. For further details regarding these majors, refer to these credentials.

Any person desiring the General Secondary Credential should consult with the Coordinator of Secondary Education during his first semester of attendance at San Diego State College.

## RECOMMENDED PROGRAM FOR THE GENERAL SECONDARY SCHOOL CREDENTIAL

1. The following courses should be completed before receiving the bachelor's degree: Health Education 151 (may be taken any semester); Education 184A and 184B (should be taken consecutively). Those persons changing from another vocational objective to education during the senior year may take Education 184A and 184B concurrently by special permission of the Coordinator of Secondary Education, following admission to Teacher Education and a check of the student's qualifications.

| | *Units* |
|---|---|
| Health Education 151, Health Education for Teachers | 2 |
| Education 184A, The Secondary School | 4 |
| Education 184B, Development and Learning | 4 |

2. After completion of requirements in (1) above, the following courses may be taken either before or after receiving the bachelor's degree; however, they should be taken concurrently with the first directed teaching assignment unless the student has equivalent teaching experience.

| | *Units* |
|---|---|
| Education 184C, The Teaching Process | 4 |
| Education 116 or 316, Directed Teaching (or equivalent) | 3 |
| Education 100B (methods in field of directed teaching assignment) | 2–4 |

3. The graduate work must consist of San Diego State College's standard year of work, 24 to 30 semester units of upper division or graduate work, including the following specific requirements:

(a) At least 12-15 semester units must be completed at San Diego State College.

(b) At least one course of graduate level work (200 number) in the major field. Most departments require two courses.

(c) At least six upper division or graduate semester units in fields outside of education.

(d) Enough units to complete at least a 21 semester unit minor, with a minimum of six semester units of upper division credit in the minor subject area.

For a statement of requirements in the teaching major and minor fields, refer to these majors and minors below.

4. Professional Education during the graduate year: Completion of the courses listed in (1) and (2) above and the following:

| | Units |
|---|---|
| Education 100B (in the field of the second directed teaching assignment) if not taken under (2) above | 2 |
| Education 230, Guidance Problems in Secondary Education | 3 |
| Education 250, Curricular Problems in Secondary Education | 3 |
| Education 316, Directed Teaching, in both major and minor fields, or equivalent teaching experience | 3–6 |

## MAJORS AND MINORS FOR THE GENERAL SECONDARY CREDENTIAL

The following pages outline tentative programs for the majors and minors for which San Diego State College is authorized to recommend for the General Secondary Credential. Every candidate for the general secondary credential must have a program approved in writing by the departmental representative in the major teaching field and in education as part of admission to the teacher education program.

Persons with majors in broad fields (Language Arts, Life Science and General Science, Physical Science and General Science, Romance Languages, or Social Science) cannot take a minor within the area of their major.

*Teaching Majors*

- Art
- Business Education
- English
- French
- Health Education
- Language Arts
- Life Science and General Science
- Mathematics
- Music
- Physical Education (Men)
- Physical Education (Women)
- Physical Science and General Science
- Psychology
- Romance Languages
- Social Science
- Spanish
- Speech Arts

*Teaching Minors*

- Art
- Business Education
- Economics
- English
- French
- Health Education
- History
- Home Economics
- Industrial Arts
- Life Science and General Science
- Mathematics
- Music
- Physical Education (Men)
- Physical Education (Women)
- Physical Science and General Science
- Social Science
- Spanish
- Speech Arts

## Outline of Requirements

### Major in Art

The requirements for the A.B. degree and the special secondary credential in art should be completed simultaneously. (Students transferring from another institution with the A.B. degree and a major in art should consult with the departmental representative for special program planning.) Refer to the special secondary credential in art. After the above requirements have been met, and the candidate has been accepted by the art staff for graduate work in art, the candidate for the general secondary credential shall complete a graduate year including the following courses in his major:

| *Graduate Year* | *Units* |
|---|---|
| Art 200A-200B, Special Problems in Art | 4 |

### Minor in Art

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Art A-B, Drawing and Composition | 2–4 |
| Art 6A-6B, Design | 4 |
| Art elective (Art 14A, Lettering, recommended) | 3–5 |
| Aesthetics 50, Appreciation and History of Art | 2 |
| Aesthetics 5, Art Orientation, or Art 51, Survey of Mexican Art | 2 |
| *Upper Division* | |
| Aesthetics 150, Appreciation and History of Art | 2 |
| Art electives | 4 |

**Major in Business Education**

The requirements for the A.B. degree and the special secondary credential in Business Education should be completed simultaneously. Refer to the special secondary credential in Business Education. After the above requirements have been met, the candidate for the general secondary credential shall complete a graduate year including the following courses in his major:

*Graduate Year*

| Select four units from the following: | *Units* |
|---|---|
| Business 200, Readings in Current Literature in Business Education | 2 |
| Business 203, Office Management | 2 |
| Business 213, Problems in Business Education | 2 |
| Business 221, Basic Business Education | 2 |
| Business 223, Problems of Distributive Business | 2 |
| Business 233, Administration and Supervision of Business Education | 2 |
| Business 260, Advanced Problem Analysis (Accounting) | 2 |

**Minor in Business Education**

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| Business 1A-1B, Typewriting | 6 |
| Business 14A-14B, Principles of Accounting | 6 |

*Upper Division*

| | |
|---|---|
| Nine upper division units should be selected in consultation with adviser in business education | 9 |

**Minor in Economics** (Not available to Social Science majors)

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| Economics 1A-1B, Principles of Economics | 6 |
| A year course in another social science area | 6 |

*Upper Division*

| | |
|---|---|
| Economics 100A, Intermediate Economic Thought | 3 |
| Economics electives | 6 |

**Major in English**

*Lower Division*

| | |
|---|---|
| One year-course from lower division English electives | 6 |
| Lower division English electives | 6 |

*Upper Division*

| | |
|---|---|
| Upper Division English courses selected under the supervision of the departmental representative | 24 |

*Graduate Year*

| | |
|---|---|
| One of the graduate seminars | 2 |
| English 192, The English Language (if not taken as an undergraduate) or 191, 195, or an additional seminar | 2–3 |

**Minor in English** (Not available to Language Arts majors)

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| English 1, Freshman Composition | 3 |
| A year course chosen from: English 50A-50B, 52A-52B, 56A-56B, or 60A-60B | 6 |

*Upper Division*

| Select one course from each of the following areas: | |
|---|---|
| Nineteenth Century English Literature: select from English 119A, 119B, 126A, 126B, or 143B | 3 |
| Shakespeare: select from English 117A or 117B | 3 |
| American Literature: select from English 131, 132, 133, or 134 | 3 |
| Language: English 192 | 3 |

### Major in French

| | *Units* |
|---|---|
| *Lower Division* | |
| French 1, 2, 3, 4, 5, 6, or equivalents | 16 |
| Spanish 1, 2, or German 1, 2, or Latin 1, 2, or their equivalents | 6 |
| History 4A-4B (recommended) | |
| Six units from courses 1, 2, 3, 4 in Spanish, German, or Latin may be applied toward general education requirements. | |
| *Upper Division* | |
| French 101A-101B, Conversation and Composition | 6 |
| French 198, Comprehensive Reading and Survey | 3 |
| Upper division courses in French with a maximum of six units which may be selected from related fields with the approval of the departmental representative | 15 |
| *Graduate Year* | |
| French 214, Contemporary French Literature | 2 |
| French 220, Explication de Textes | 2 |

### Minor in French (Not available to Romance Languages majors)

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| French 1, 2, 3, 4, 5, 6, or equivalents | 16 |
| History 4A-4B (recommended) | |
| *Upper Division* | |
| French 101A-101B, Conversation and Composition | 6 |

### Major in Health Education

This teaching major may be used as a major for the A.B. degree if the student has been admitted to candidacy for the general secondary credential and has completed at least eight units in professional education courses, including Education 184A-184B, or equivalent, by the date of degree candidacy. The major is designed around the general major, with health education as the field of concentration.

| | |
|---|---|
| *Lower Division* | |
| Health Education 65, Community Health | 3 |
| Health Education 90, Physiology of Reproduction | 1 |
| Home Economics 61A, Nutrition | 2 |
| Physiology 1A, Human Physiology | 3 |
| Zoology 8, Human Anatomy | 3 |
| *Upper Division* | |
| 36 upper division units to include the following: | |
| Health Education 145, Safety Education and Accident Prevention | 3 |
| Health Education 151, Health Education for Teachers | 2 |
| Health Education 152, Health Education Programs | 3 |
| Health Education 153, Administration of the School Health Program | 3 |
| Health Education 199, Special Study in Health Education | 3–6 |
| Physical Education 151, Instructor's Course in First Aid | 2 |
| Sociology 135, Marriage and the Family | 3 |
| Psychology 131, Foundations of Personality | 2 |
| Psychology 132, Personality Adjustment | 2 |
| Bacteriology 101, General Bacteriology | 4 |
| Six to nine upper division units selected from one of the teaching major or minor fields for the general secondary credential, selected with approval of the departmental adviser | 6–9 |

### Minor in Health Education

A minimum of 21 semester units required.

Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

| | |
|---|---|
| *Lower Division* | |
| Health Education 21, Principles of Healthful Living | 2 |
| Health Education 65, Community Health | 3 |
| Health Education 90, Physiology of Reproduction | 1 |

| *Upper Division* | *Units* |
|---|---|
| Health Education 145, Safety Education and Accident Prevention | 3 |
| Health Education 151, Health Education for Teachers | 2 |
| Health Education 152, Health Education Programs | 3 |
| Health Education 153, Administration of School Health Program | 3 |
| Health Education 199, Special Study in Health | 2–3 |
| Physical Education 151, Instructor's Course in First Aid | 2 |

**Minor in History** (Not available to Social Science majors)

A minimum of 21 semester units required. A year course in United States History must be included.

| *Lower Division* | |
|---|---|
| History 4A-4B, Modern Europe, or 8A-8B, The Americas, or 17A-17B, American Civilization | 6 |
| Electives chosen from anthropology, economics, geography (except Geography 1 or 3), political science, sociology | 6 |
| Additional social science electives | 0–3 |
| *Upper Division* | |
| History electives | 6–9 |

**Minor in Home Economics**

A minimum of 21 semester units required.

| *Lower Division* | |
|---|---|
| Home Economics 5, Foods | 3 |
| Home Economics 10, Clothing Fundamentals, or 11, Advanced Clothing | 3 |
| Electives in Home Economics | 3–6 |
| *Upper Division* | |
| Home Economics 105, Family Meals | 3 |
| Home Economics 150, Home Management | 3 |
| Home Economics 170, Child Care and Development | 3 |
| Electives in Home Economics | 3–6 |

Electives for enrichment—see department chairman.

**Minor in Industrial Arts**

A minimum of 21 semester units required.

| *Lower Division* | | |
|---|---|---|
| Industrial Arts 21, Industrial Drawing | | 3 |
| Select at least three courses from the following: | | 9 |
| Industrial Arts 31, General Metalworking | 3 | |
| Industrial Arts 51, General Woodworking | 3 | |
| Industrial Arts 61, Electricity and Radio | 3 | |
| Industrial Arts 71, Transportation | 3 | |
| Industrial Arts 81, Graphic Arts | 3 | |
| *Upper Division* | | |
| Industrial Arts 122A, Industrial Drawing | | 2 |
| Select appropriate upper division electives | | 7 |

**Major in Language Arts**

This major requires 46 units to be taken in the fields of composition, dramatics, journalism, language, literature, radio or motion pictures, and speech arts. Education courses to be taken with this major include the standard program for all general secondary credentials plus Education 154, Reading in the Secondary School, and Education 100B in both English and speech arts. A methods course in a teaching minor is also required for the credential. Students using this major for the A.B. degree must complete a minimum of eight units in education courses by date of degree candidacy.

| *Lower Division* | |
|---|---|
| English 50A-50B, or 52A-52B, or 60A-60B (or two upper division courses may be substituted, selection to be made from English 116A-116B, or 118A-118B, or 119A-119B, or 120A-120B, or 126A-126B, or 143A-143B) | 6 |
| Journalism 51A | 3 |
| Speech Arts 60A, or 60B, or 55A, or 55B | 3 |
| Speech Arts 81 | 3 |

*Upper Division*

| | *Unit* |
|---|---|
| English 192 | 3 |
| English 106 or 191 | 3 |
| English 131, or 132, or 133, or 134 | 3 |
| English 117A, or 117B, or 152A, or 152B | 3 |
| Journalism 152 | 3 |
| Speech Arts 108, 159, and 176 | 9 |
| Speech Arts 191, or 192A, or 192B | 3 |

If lower division English sequence is taken in American Literature, the upper division course work in literature should be taken in other areas.

*Graduate Year*

| | |
|---|---|
| One 200 numbered course in speech arts | 2 |
| One 200 numbered course in English | 2 |

### Major in Life Science and General Science

*Lower Division*

| | |
|---|---|
| Zoology 1A-1B, General | 8 |
| Botany 2A-2B, General, or 1, Introduction | 4–8 |
| Zoology 20, Human Anatomy and Physiology, or Physiology 1C, Human Physiology | 2–3 |
| Chemistry 2A-2B | 6 |
| Physics 2A-2B | 6 |

Geology 2, General, Astronomy 1, Descriptive, and Physics 3A-3B, Physical Measurements, recommended.

12 units in natural science courses may be applied toward general education requirements.

*Upper Division*

| | |
|---|---|
| Zoology 119, Field Zoology | 4 |
| Botany 114, Plant Taxonomy, or Botany 119, Field Botany | 3–4 |
| Bacteriology 101, General Bacteriology | 4 |
| Botany 155, Genetics, or Zoology 165, Human Heredity | 2 |
| Zoology 160, Evolution | 2 |
| Zoology 150, Readings in Biology | 2 |
| Two courses chosen from the following: | |
| Zoology 110, 112, 113, 115, 118, 121 | 7–8 |

*Graduate Year*

| | |
|---|---|
| Zoology 200, Seminar | 3 |
| Zoology 202, Hydrobiology, or Zoology 213, Advanced Studies in Ornithology | 2 |

### Minor in Life Science and General Science

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| Biology 3, Principles, and Biology 4, Plant and Animal Types | 6 |
| Physical Science 1 and 2, Introduction | 6 |
| Physiology 1C, Human Physiology | 2 |

*Upper Division*

| | |
|---|---|
| Botany 114, Plant Taxonomy, Botany 119, Field Botany, or Zoology 119, Field Zoology | 3–4 |
| Botany 150, Readings in Biology | 2 |
| Zoology 160, Evolution | 2 |

### Major in Mathematics

| | |
|---|---|
| Mathematics 3A, Analytic Geometry | 3 |
| Mathematics 3B, First Course in Calculus | 3 |
| Mathematics 4A, Second Course in Calculus | 3 |
| Additional mathematics or work in related areas | 3 |

***Suggested courses in related areas:*** Astronomy 1, Descriptive Astronomy; Business 2, Mathematics of Finance; Engineering 1A, Plane Surveying; Engineering 21, Descriptive Geometry; Physics 4A, Mechanics of Solids and Fluids; Physics 2A, General.

| *Upper Division* | *Units* |
|---|---|
| At least one course in Algebra | 3 |
| At least one course in Geometry | 3 |
| Mathematics 140A, Mathematical Statistics | 3 |
| Mathematics 117, Intermediate Calculus (unless 4B, Third Course in Calculus taken in lower division) | 3 |
| Mathematics 104, History of Mathematics | 3 |
| Additional upper division units in mathematics or related areas | 9 |

*Graduate Year*

Four units selected from the following:

| | |
|---|---|
| Mathematics 201, Concepts of Geometry from an Advanced Point of View | 2 |
| Mathematics 202, Concepts of Algebra from an Advanced Point of View | 2 |
| Mathematics 204, Advanced Work in the History of Mathematics | 2 |
| Mathematics 224, Functions of a Complex Variable | 3 |

### Minor in Mathematics

A minimum of 21 semester units required.

*Lower Division*

| | |
|---|---|
| Mathematics D, Trigonometry (or high school equivalent for which pattern credit may be allowed) | 3 |
| Mathematics 3A, Analytic Geometry | 3 |
| Mathematics 3B, First Course in Calculus | 3 |
| One course selected from courses in related areas<br>(See above under teaching major in mathematics) | 3 |

*Upper Division*

| | |
|---|---|
| Mathematics 104, History of Mathematics | 3 |
| Mathematics electives | 6 |

### Major in Music

The requirements for the A.B. degree and the special secondary credential in music should be completed simultaneously. Students transferring from another institution with the A.B. degree and a major in music should consult with the departmental representative for special program planning. Refer to the special secondary credential in music. After the above requirements have been met, the candidate for the general secondary credential shall complete a graduate year including 4 units selected from the following courses in his major:

*Graduate Year*

Four units selected from the following:

| | |
|---|---|
| Music 200A-200B, Special Problems in Music | 2–2 |
| Music 203A-203B, Musicology | 2–2 |
| Music 206A-206B, Composition | 2–2 |

### Minor in Music

A minimum of 21 semester units required. The student is required to demonstrate vocal or instrumental proficiency before admission to the minor program may be granted. As laboratory experience, the student with music as a minor is required to participate in one music activity each semester for seven semesters. (In special cases this requirement may be waived by the chairman of the Music Department.)

*Lower Division*

| | |
|---|---|
| Music 9A, Elementary Harmony | 3 |
| Music 52A, History of Music | 3 |
| Music 10A-10B, Piano (may be omitted in part or in full upon demonstration of proficiency) | 2 |
| Music activities chosen from courses numbered 70 to 87 | 4 |
| Selected from the following: Music 15A, 20A, 25A, 30A | 3–5 |

*Upper Division*

| | |
|---|---|
| Music 146A, Fundamentals of Conducting | 1 |
| Music 146B, Instrumental Conducting, or 146C, Choral Conducting | 1 |
| Music activities chosen from courses numbered 170 to 187 | 3 |
| Selected from the following: Music 111, 112, 116, 117, 121, 122, 126, 127, 131, 132, or 150 | 1 |

## Major in Physical Education for Men

The requirements for the A.B. degree and the special secondary credential in physical education should be completed simultaneously. After the major field requirements for the special secondary credential in physical education have been met, the candidate for the general secondary credential shall complete a graduate year, including two of the following courses in his major:

| | *Units* |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |
| Physical Education 298, Special Study | 2 |

## Minor in Physical Education for Men

A minimum of 21 semester units required.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

*Lower Division*

| | |
|---|---|
| Physical Education 53, Physical Education in the Elementary Schools | 2 |
| Physical Education 72, Introduction | 2 |
| Electives | 2–4 |

*Upper Division*

| | |
|---|---|
| Professional activity courses (should be selected in consultation with departmental representative) | 4 |
| Physical Education 151, Instructor's Course in First Aid | 2 |
| Physical Education 190, Administration of Physical Education in Secondary Schools | 3 |
| Physical Education 170A or 170B Recreational Leadership | 2 |
| Electives | 2–4 |

## Major in Physical Education for Women

The requirements for the A.B. degree and the special secondary credential in physical education should be completed simultaneously. After the major field requirements for the special secondary credential in physical education have been met, the candidate for the general secondary credential shall complete a graduate year including two of the following courses in the major:

| | |
|---|---|
| Physical Education 200, Evaluation Procedures in Health, Physical Education, and Recreation | 2 |
| Physical Education 201, Developmental Physical Education | 2 |
| Health Education 202, Problems in Health Education | 2 |
| Physical Education 203, Problems in Physical Education | 2 |
| Physical Education 204, Problems in Recreation | 2 |
| Physical Education 298, Special Study | 2 |

## Minor in Physical Education for Women

A minimum of 21 semester units required.

A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

*Lower Division*

| | |
|---|---|
| Physical Education 1A, Fundamental Skills | ½ |
| Physical Education 2A, Folk Dancing | ½ |
| Physical Education 3A, Modern Dance | ½ |
| Physical Education 4, 5, 6, Team Sports | 1½ |
| Physical Education 53, Physical Education in the Elementary School | 2½ |
| Physical Education electives | 3½–4½ |

*Upper Division*

| | |
|---|---|
| Physical Education 156A-156B, Sports Methods | 4 |
| Physical Education 161, Folk Dancing Materials and Advanced Techniques | 2 |
| Electives selected from Physical Education 190, 170B, 164A-164B | 5–6 |

### Major in Physical Science and General Science

To obtain a teaching major in physical science and general science for the general secondary credential a student obtaining the A.B. or B.S. degree in chemistry or physics, or the A.B. degree in physical science, must include in his program the following courses, which will also satisfy the natural science requirements for general education.

| *Lower Division* | *Units* |
|---|---|
| Astronomy 1, Descriptive | 3 |
| Biology 3 and 4, General, and Plant and Animal Life | 6 |
| Geology 2 or 1A, General or Physical | 3–4 |

Recommended electives: Astronomy 9, Geography 3, Geology 3; general education courses in literature, philosophy, and the arts: Industrial Arts 5, 6, or 85.

*Upper Division*

Same as for the A.B. or B.S. major in chemistry, physics, or physical science.

Recommended electives, if not included as part of the major: Botany 119, Chemistry 101A, Physics 107, 158, Zoology 119, and Geography 145 (a general education course in social science).

*Graduate Year*

Select four units from the following:

| | |
|---|---|
| Chemistry 200, Seminar | 2–4 |
| Physics 200, Seminar | 2–4 |

### Minor in Physical Science and General Science

This minor may be used for the A.B. degree only if the student has been admitted to the teacher education program and has completed eight units in professional education courses by the date of degree candidacy.

This minor consists of 26 units in courses specified below.

| | |
|---|---|
| Astronomy 1, Descriptive Astronomy | 3 |
| Biology 3 and 4, Principles, and Plant and Animal Types | 6 |
| Chemistry 2A-2B, or 1A-1B, Fundamentals, or General | 6–10 |
| Geology 2 or 1A, General, or Physical | 3–4 |
| Physics 2A-2B and 3A-3B, or 4A-4B-4C, General, or Principles | 8–12 |

The following courses are recommended as electives: Astronomy 9, Geology 3, Chemistry 101A, Geography 3, Geography 145, Physical Science 150, Physics 148, Botany 119 or Zoology 119, Industrial Arts 5, 6, and 85.

### Major in Psychology

This major can be used for a general secondary credential only if the candidate completes *two* teaching minors.

*Lower Division*

| | |
|---|---|
| Psychology 5 and 6, Principles | 6 |

*Upper Division*

| | |
|---|---|
| Psychology 104A, Statistical Methods | 3 |
| Psychology 105B, Individual Mental Testing | 3 |
| Psychology 131, Foundations of Personality | 2 |
| Psychology 132, Personality Adjustment | 2 |
| Psychology 151, Introduction to Clinical Appraisal | 3 |
| Psychology 160A, Experimental Psychology | 3 |
| Electives to be selected with approval of the departmental representative | 8 |

*Graduate Year*

| | |
|---|---|
| Psychology 201, Seminar in Psychology | 2 |
| Education 230, Guidance Problems in Secondary Education | 3 |

### Major in Romance Languages

*Lower Division*

| | |
|---|---|
| Spanish 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| French 1, 2, 3, 4, 5, 6, or the equivalents | 16 |

History 4A-4B, or 8A-8B (recommended)

Six units from courses 1, 2, 3, 4 in French or Spanish may be applied toward general education requirements.

| *Upper Division* | *Units* |
|---|---|
| Spanish 101A-101B, Conversation and Composition | 6 |
| French 101A-101B, Conversation and Composition | 6 |
| Spanish 198 or French 198, Comprehensive Reading and Survey Course | 3 |
| Courses in Spanish literature, French literature or Spanish-American literature, selected with the approval of the departmental representative | 9 |

NOTE: At least nine units of upper division courses must be taken in each language.

*Graduate Year*

Any two of the following courses:

| | |
|---|---|
| French 214, Contemporary French Literature | 2 |
| French 220, Explication de Textes | 2 |
| Spanish 201, Old Spanish | 2 |
| Spanish 204, Seminar in Spanish-American Literature | 2 |

### Major in Social Science

This teaching major may be used as a major for the A.B. degree if the lower and upper division requirements listed below are completed and the student has been admitted to candidacy for the general secondary credential and has completed at least eight units of professional courses in education by the date of degree candidacy. Twelve units of social science courses in the major may be applied toward general education requirements in social science.

The major must include six units in United States history and work from at least four of the social science fields listed below.

*Lower Division*

A student must complete a minimum of six units in each of at least three fields he may select from the departments named below:

Economics
Geography
History
Political Science
Sociology and/or Anthropology

*Upper Division*

A student must complete a minimum of 30 units with the approval of the departmental representative as follows:

| | |
|---|---|
| 1. A minimum of 12 units from any field named above | 12 |
| 2. A minimum of six units from each of two fields named above, excluding the field selected for the major upper division concentration | 12 |
| 3. Electives from social science fields | 6 |

*Graduate Year*

| | |
|---|---|
| Post-bachelor work selected with approval of the departmental representative | 4 |

### Minor in Social Science

(Not available to a student with a major in a specific social science.)

This minor may be used for the A.B. degree only if the student has been admitted to the teacher education program and has completed eight units in professional education courses by the date of degree candidacy.

This minor consists of 27 units in courses specified below.

*Lower Division*

A student must complete a six unit sequence from each of three of the following fields:

Anthropology 1A-1B
Economics 1A-1B
Geography 12A-12B
History 4A-4B or 8A-8B
Political Science 1A-1B or 71A-71B
Sociology 50 and 51

*Upper Division*

| | |
|---|---|
| One upper division sequence in American history | 6 |
| Elective from social science fields named above | 3 |

### Major in Spanish

| *Lower Division* | *Units* |
|---|---|
| Spanish 1, 2, 3, 4, 5, 6, or the equivalents | 16 |
| French 1, 2, or German 1, 2, or Latin 1, 2, or their equivalents | 6 |
| History 4A-4B, or 8A-8B (recommended) | |
| Six units from courses 1, 2, 3, 4 in French, German, or Latin may be applied toward general education requirements. | |
| *Upper Division* | |
| Spanish 101A-101B, Conversation and Composition | 6 |
| Spanish 198, Comprehensive Reading and Survey | 3 |
| Upper division courses in Spanish with a maximum of six units which may be selected from related fields with the approval of the departmental representative | 15 |
| *Graduate Year* | |
| Spanish 201, Old Spanish | 2 |
| Spanish 204, Seminar in Spanish-American Literature | 2 |

### Minor in Spanish (Not available to Romance Languages majors)

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Spanish 1, 2, 3, 4, 5, 6, or equivalents | 16 |
| History 4A-4B, or 8A-8B (recommended) | |
| *Upper Division* | |
| Spanish 101A-101B, Conversation and Composition | 6 |

### Major in Speech Arts

The requirements for the A.B. degree and the special secondary credential in Speech Arts should be completed simultaneously. Refer to the special secondary credential in Speech Arts. After the above requirements have been met, the candidate for the general secondary credential shall complete a graduate year including the following courses in his major:

*Graduate Year*

Select four units from the following courses:

| | |
|---|---|
| Speech Arts 260, Seminar in Oral Interpretation | 2 |
| Speech Arts 221, Seminar in Articulatory Problems in Speech | 2 |
| Speech Arts 245, Seminar in Technical Practice | 2 |
| Speech Arts 259, Seminar in Stage Direction | 2 |
| Speech Arts 200, Seminar in History or Oratory | 2 |

### Minor in Speech Arts

A minimum of 21 semester units required.

| | |
|---|---|
| *Lower Division* | |
| Speech Arts 3, Speech for Communication | 2 |
| Speech Arts 4, Extemporaneous Speaking | 3 |
| Speech Arts 11A-11B, Interpretation | 6 |
| Speech Arts 82, Radio Announcing | 3 |
| Electives in speech from 61 or 63 | 0–1 |
| *Upper Division* | |
| Speech electives (should be selected in consultation with departmental representative) | 6–7 |

## CURRICULA LEADING TO CREDENTIALS IN ADMINISTRATION AND SUPERVISION

Courses and field experience are available which lead to credentials in Elementary and Secondary Administration, Elementary and Secondary Supervision and Special Subject Supervision. A selection and admission program is employed to select candidates for these credentials who have the promising background experiences and competencies necessary to enable them to serve in positions of supervision and administration.

## GENERAL REQUIREMENTS FOR ADMINISTRATION AND SUPERVISION CREDENTIALS

In addition to the general requirements of the State of California for all credentials the following requirements are common for admission to and completion of al supervision and administration credentials:

1. Maintain a grade point average of 1.75 on all work applied toward the credential exclusive of courses required for the basic credential.
2. Admission to the program of Administrative Studies, which includes:
   a. Completion of information on a personal data sheet and the filing of official transcripts of all college work. (Forms and information available in Division of Education Offices.)
   b. Completion of a minimum of two counseling interviews, one with the Chairman of Administrative Studies and one with a resident staff member teaching courses on the level, elementary or secondary, at which the candidate is working. The sequence of courses for the credential will be planned with the candidate at this time.
4. Admission to the program should be completed at any time previous to enrolling in Education 262, 263, 264, or 265.
5. Candidate must present a letter of acceptance from his administrator before enrolling in any course requiring field projects: Education 262, 263, 264, or 265.
6. Candidate may not enroll for more than three semester units of 200 numbered courses applied toward the credential during any single semester when he has a full-time teaching position.
7. Candidate must have completed a minimum of one full year of successful teaching experience before he may be admitted to courses in the core subjects, Education 262, 263, 264, or 265.
8. Candidate must have completed a minimum of two full years of successful teaching experience before he may be admitted to Education 266 or 267 (Field Experience) or to Education 316B (Internship in School Administration or Supervision).

## CURRICULA LEADING TO CREDENTIALS IN ELEMENTARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the requirements listed above, the candidate shall:

1. Possess a valid General Elementary Credential.
2. Present written evidence of two years of successful teaching experience on the elementary level.
3. Complete 30 semester units for the Administration Credential (24 units for the Supervision Credential) of upper division or graduate work in addition to the holding of the General Elementary Credential. These units shall include specific courses designated by the California State Department of Education and San Diego State College.
4. Complete a minimum of 15 units of work in residence at San Diego State College.
5. Make formal application for an evaluation for the credential at San Diego State College and at the completion of all requirements, make application for the credential.

### Course Requirements for the Elementary Administration and Elementary Supervision Credentials as Designated by the State Board of Education

A. Courses in undergraduate or graduate training (letters and numbers correspond with State Department Bulletin Credential Regulations):

*1. The scope, functions, and place of the system of public education of elementary and secondary schools; rural and urban schools; vocational education; education for adults; special school programs; auxiliary agencies:
Education 115A ________________________________________ 2 units

2. Principles and practices of curriculum construction and evaluation:
Education 240 or 245 ____________________________________ 3 units

3. Measurement and appraisal of educational achievements and aptitudes:
Education 102A ________________________________________ 3 units

4. Pupil personnel, counseling and guidance, including techniques and practices of child study and parent education:
   Education 155 or 230 ---------- 3 units

B. Concurrently with or subsequently to teaching experience, graduate or undergraduate training shall include work in the following subject groups, including directed field work of such a nature as to give the applicant first-hand knowledge of problems and issues as they exist in the public schools:

*1. Federal, state, county and city school organization, administration, and supervision:
   Education 260 ---------- 3 units
*2. School finance, business administration, and law:
   Education 270 ---------- 3 units
3. The organization and administration of elementary schools:
   Education 262 ---------- 3 units
4. Elementary school supervision:
   Education 264 ---------- 3 units
5. Field work or internship in school administration or supervision:
   Education 266 or 316B ---------- 3-6 units

C. Elective courses in general or professional education to complete 30 units (24 for supervision) *after receiving the General Elementary Credential or the A.B. degree.*

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* Courses not required for the Supervision Credential.

## CURRICULA LEADING TO CREDENTIALS IN SECONDARY SCHOOL ADMINISTRATION AND SUPERVISION

In addition to the common requirements listed above, the candidate shall:

1. Possess a valid General Secondary Credential.
2. Present written evidence of two years of successful teaching experience on the secondary level.
3. Complete 18 semester units for the Administration Credential (15 units for the Supervision Credential) of upper division or graduate work after the receipt of the General Secondary Credential. These units shall include specific courses designated by the California State Board of Education and San Diego State College.
4. Complete a minimum of 12 units of work in residence at San Diego State College.
5. Make formal application for an evaluation for the credential at San Diego State College and at the completion of all requirements make application for the credential.

### Course Requirements for the Secondary Administration and Secondary Supervision Credentials as Designated by the State Board of Education

A. Courses in undergraduate or graduate training (letters and numbers correspond with State Department Bulletin Credential Regulations):

*1. The scope, functions, and place in the system of public education of elementary and secondary schools; vocational education; education for adults; special school programs; auxiliary agencies:
   Education 115A and 115B or 184A ---------- 4-5 units
2. Principles and practices of curriculum construction and evaluation:
   Education 250 ---------- 3 units
3. Measurement and appraisal of educational achievement and aptitudes:
   Education 102D or 184C ---------- 3-4 units
4. Pupil personnel, counseling and guidance, including techniques and practices of child study and parent education:
   Education 230 ---------- 3 units

B. Concurrently with or subsequently to teaching experience, graduate or undergraduate training shall include work in the following subject groups, including directed field work of such a nature as to give the applicant first-hand knowledge of problems and issues as they exist in the public schools:

*1. Federal, state, county and city school organization, administration, and supervision:
  Education 260 ---------------------------------------------- 3 units

*2. Finance, law, business administration:
  Education 270 ---------------------------------------------- 3 units

3. The organization and administration of secondary schools:
  Education 263 ---------------------------------------------- 3 units

4. Supervision of instruction and curriculum in the secondary schools:
  Education 265 ---------------------------------------------- 3 units

5. Directed field work or internship in administration or supervision:
  Education 267 or 316B------------------------------------- 2-6 units

C. Elective courses in general or professional education to complete 18 units (15 for supervision) *after receiving the General Secondary Credential.*

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* Courses not required for the Secondary Supervision Credential.

## SPECIAL SUBJECT SUPERVISION CREDENTIAL

This credential is available for persons who wish to supervise in a special subject area. Those desiring this credential should see the Chairman of the Division of Education.

# THE BACHELOR OF EDUCATION DEGREE AND THE GENERAL ELEMENTARY CREDENTIAL

## ELIGIBILITY FOR CANDIDACY

Teachers in California public schools with a minimum of 60 semester units of standard college work are eligible for candidacy for the Bachelor of Education degree. The purpose of this degree is to increase the professional competence of teachers in California public schools who do not hold a bachelor's degree. The educational program of each applicant shall be determined on the basis of his previous preparation and of he services he is to render. In the period of professional preparation the applicant hall be guided into those learning experiences designed to meet his cultural and pro-essional needs.

## MINIMUM REQUIREMENTS

An applicant for the general elementary credential and the Bachelor of Educa-ion degree shall comply with the procedures for application and with the requirements or personal qualifications and general training and shall have completed a program ncluding the following minimum requirements:

a. A four-year college course of 124 semester units, or the equivalent.

b. Eighteen semester units, or the equivalent, of professional work in education, constituting an organized program designed to prepare candidates in the following areas:

   (1) The evolution of educational thought and practice as to the function of the school in a democratic society, with emphasis on the elementary school.

   (2) The nature of individual growth and development; the psychological aspects of learning; child study, with emphasis on directed observation of children; mental hygiene and personality development; parent education; guidance practices.

   (3) The selection and arrangement of learning experiences, instructional materials, learning methods and appraisal techniques related to all statutory requirements for teaching, including reading, writing, spelling, language study, arithmetic, geography, history of the United States and of California, civics including the Constitution of the United States, music, art, physical education, healthful living, morals and manners, safety education, and fire prevention.

   (4) The use of audio-visual aids in instruction.

c. Directed teaching in the elementary school, eight semester units, or the equivalent, under the supervision of superior teachers in actual classroom situations of the elementary school level.

d. Sixty-one semester units or the equivalent in basic subject fields, distributed approximately as follows:

   (1) *Social Studies.* Twelve semester units, or the equivalent, with emphasis upon current economic, political, and social problems and world history and geography, sociology and anthropology. The legal requirement in United States Constitution, American history, institutions, and ideals, and principles of California state and local government shall be included in the social studies program.

   (2) *Science.* Twelve semester units, or the equivalent, in the fields of physical and biological science, with emphasis upon the study and use of the environment.

(3) *English*, including speech. Twelve semester units, or the equivalen including oral and written expression, world literature, children's liter ture, dramatics, detection and correction of speech defects, and the use books and libraries.

(4) *Mathematics.* Three semester units, or the equivalent, including subje matter and techniques essential in the teaching of mathematics in th elementary school.

(5) *Health and Hygiene.* Three semester units, or the equivalent, includin personal hygiene, subject matter and techniques essential in health ed cation to elementary school pupils.

(6) *Physical Education.* Three semester units, or the equivalent, includin subject matter and techniques essential in the teaching of physical educ tion to elementary school pupils.

(7) *Music.* Eight semester units, or the equivalent, including content an techniques appropriate for the elementary school.

(8) *Art.* Eight semester units, or the equivalent, in graphic art and indu trial arts applicable to learning experiences appropriate for elementar school children.

e. The remaining units necessary to complete the requirements for the Bachel of Education degree shall be distributed among those offerings of the instit tion that best serve the cultural and professional needs of the candidate, exce that a course or the equivalent in fire prevention must be included.

## EVALUATION OF TEACHING EXPERIENCE AND SUBJECT MATTER FIELDS

a. A candidate with two or more years' teaching experience may be awarde a maximum of 8 semester units of credit, or the equivalent, in directed teachin provided he demonstrates satisfactory skill to a representative of the instit tion under whose direction he is completing his degree program, or provide other conditions set by the institution to insure classroom skill are met. Th credit shall not be applied until the candidate has completed at least 11 semester units, or the equivalent, of his program.

b. Credit toward the B. Ed. degree may be secured by passing comprehensiv examinations in the fields of study mentioned in paragraphs (b) and (d above. These examinations must be in courses regularly offered by the colleg

## INSTITUTION AND RESIDENCE REQUIREMENTS

a. A minimum of 30 semester units, or the equivalent, must be secured from th college conferring the degree.

b. A least 12 semester units, or the equivalent, must be earned in campus res dence course work at the college conferring the degree and must be secure after completion of at least 90 semester units, or the equivalent. (This residenc requirement is subject to possible change during the current school year.)

c. A maximum of 30 units may be secured by examination.

# BACHELOR OF VOCATIONAL EDUCATION DEGREE

The purpose of this degree is to promote the professional advancement of the ocational teachers of the State. Eligible candidates for this degree shall be limited to hose vocational teachers who meet the requirement established in the Education Code f the State of California and who are recommended by the Board of Examiners for ocational Teachers.

The educational program for each applicant shall be determined by the College n terms of the needs of the individual applicant and the standards of the institution.

Each applicant for the degree shall have completed, with a grade point average of .0 (grade of C) or better, a course of 124 semester units, including the credits recomnended by the Board of Examiners, and shall have met the general education requireents prescribed for the bachelor of arts or bachelor of science degree.

The credits recommended by the Board of Examiners for Vocational Teachers or the applicant's occupational, managerial and supervisory experience shall be pplied toward a major in vocational arts. The vocational teacher training completed y the applicant may be used toward a minor in education or toward electives if some ther minor is used.

The candidate for this degree must complete a minimum of 24 semester units n residence at this College, including registration in 36 weeks of residence work. The andidate must also meet all institutional requirements prescribed for candidates or other bachelor degrees, including requirements in American history, institutions, nd ideals, U. S. Constitution, and California state and local government.

# PREPROFESSIONAL AND OCCUPATIONAL CURRICULA

Preprofessional and occupational curricula, which usually require four years o collegiate work, are offered. Curricular outlines of preprofessional study, which ar presented on the following pages, meet the typical requirements for admission to pr fessional schools. Students expecting to complete their professional training at othe institutions should modify the suggested outlines of study to meet the requirements o the professional schools of their choice. Curricular outlines for complete training lea ing to vocations are also presented on the following pages.

Curricular outlines are presented for the following:

Preagricultural
Business
Predental
Engineering
Home Arts
Inter-American Relations
Journalism
Laboratory Technique
Prelegal
Life Science Vocational
Premedical
Personnel Management
Prepharmacy
Public Administration
Recreation
Social Service

Students planning to enter professional or occupational fields in forestry, nursin optometry, or veterinary science may obtain assistance from advisers in these areas i planning lower division courses leading to further education in these fields.

## PREAGRICULTURAL CURRICULA

These curricula are provided for students who plan to enter the field of agricultur to enable them to obtain basic science and general education courses before transferrin to an agricultural institution. These students should ascertain the lower division r quirements of the college to which they expect to transfer and include such requirement in the plan suggested below.

Students in high school preparing to study agriculture should include the follow ing subjects: Elementary algebra, plane geometry, intermediate algebra, trigonometr chemistry, physics, mechanical drawing, and three years of one foreign language, i required by the college to which the student expects to transfer.

*Curriculum in Plant Science:* Freshman year, physical education activitie Health Education 21, Chemistry 1A-1B, Botany 2A-2B, Physics 2A-2B, English 1, an Speech Arts 3 (32 units); sophomore years, physical education activities, Economic 1A-1B, English 2A or other literature course, Chemistry 101A-101B, Geology 1A o 2A, Bacteriology 1, Zoology 1A and Psychology 1 (32 units).

*Curriculum in Animal Science:* Freshman year, physical education activitie Chemistry 1A-1B, Zoology 1A-1B, Physics 2A-2B, English 1, Speech Arts 3, Healt Education 21 (32 units); sophomore year, physical education activities, Psychology English 2A or other literature course, Economics 1A-1B, Bacteriology 1, Botany Chemistry 101A-101B, Zoology 20 or 8, and 100 (36 units).

Students should consult with the adviser in the preagricultural curriculum fo selection and arrangement of courses.

## BUSINESS CURRICULA

The Division of Business consists of three departments: Accounting and Busines Management; Marketing; and Business Education, Secretarial and Office Manag ment. Each department offers majors in business in various fields of specializatio within the department, leading to the bachelor of science degree.

The Department of Accounting and Business Management offers specializatio in accounting, banking and finance, business management, insurance, and credit man agement. The Marketing Department offers specialization in marketing and in personne management. The Business Education, Secretarial and Office Management Department offers specialization in general business, secretarial and office management and in teacher education leading to the special secondary and general secondary school credentials.

The first two years of the business curricula are introductory. During this period the student acquires a basis for further study and an understanding of the place that business fills in modern economic life. There are some differences in the lower division requirements in the various fields of specialization. A selection of the field of specialization should be made as early as possible by the student. A student may transfer from one field of specialization to another, but with possible loss in time because of the differences in requirements among the various fields. The student follows a program of studies that is designed to provide a vocational ability in at least one area.

Refer to the section of the catalog: Announcement of Courses, under the heading of Business Curricula, for specific requirements in business majors. Students should consult with the departmental adviser in selection and arrangement of courses.

## PREDENTAL CURRICULUM

Candidates for a degree in dentistry should ascertain the entrance requirements of the dental college to which they expect to transfer and should make whatever changes in the following typical requirements that may seem desirable in satisfying the requirements of the specific dental college.

The curriculum for dental hygiene is essentially the same as for predentistry.

High school students planning to enter dentistry should include in the high school program the following subjects: Elementary algebra, plane geometry, intermediate algebra, chemistry, physics, mechanical drawing, and three units in one foreign language if required by the college to which a student expects to transfer.

*Course of Study for Predental Curriculum:* Freshman year, physical education activities, Health Education 21, Psychology 1, Speech Arts 3, English 1, English 2A or other literature course, Chemistry 1A-1B, Physics 2A-2B and 3A-3B (32 units); sophomore year, physical education activities, Chemistry 5A, Zoology 1A-1B, Mathematics C and D, social science including courses in U. S. history, Constitution, and California government, and electives in general education (32 units).

The following courses for a third year in preparation for dentistry are suggested for students who fail to receive acceptance from a dental college after completing the prescribed 60 units: Chemistry 101A-101B; Zoology 100 and 106; Art 119A, Psychology 11; additional courses in general education.

## ENGINEERING CURRICULA

The engineering program is designed to give a student a sound training in the undamentals of general engineering with a minimum of specialization, and at the same ime provide the broad training and experiences which constitute a liberal education. The program leads to the degree of Bachelor of Science in Engineering.

Students graduating in engineering will find employment in various functions of heir chosen field. For example, a student who has selected the mechanical engineering ption may find employment in the operation of a steam plant, or in the application and ales of construction equipment.

The program is intended to provide the essential training in those functions which re within the scope of a four year program. These, specifically, are the production, peration, maintenance, service, sales, and management functions of engineering. Curicula and individual courses are designed to emphasize these functions. Students who esire training for work in such fields as research, design, and development should plan o complete their education at a university where these fields are emphasized.

### FIELDS OF SPECIALIZATION

The freshman and sophomore years of the engineering curricula concentrate pon the development of an adequate scientific and mathematical background together with introductory engineering courses. With minor variations the first two years of tudy are the same for all engineering students.

The junior and senior years concentrate upon the application of this backgroun to the study of engineering theory and practice. In the junior and senior years, tw different types of programs are available:

(1) A general engineering program.

(2) A program which provides limited specialization in the major fields c engineering.

The general engineering program recognizes the mutual interdependence of th fields of engineering and the overlapping of these fields which occur in a high pe centage of engineering positions. This program emphasizes the subject material mos common to the major fields of engineering and includes a high percentage of shop an laboratory work.

The second type of program, while retaining most of the features of the genera program, provides the opportunity for limited specialization in several optiona engineering fields. These options include: aeronautical, chemical, civil, electrical, electronics, and mechanical engineering, and engineering economics.

Students may elect either type of program, depending upon their occupationa or vocational objectives.

## HIGH SCHOOL PREPARATION

**The high school program should include the following subjects: Elementar algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; solid geometr ½ unit; trigonometry, ½ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawin 1 unit.**

## GENERAL REQUIREMENTS

For general requirements for the B.S. degree, refer to the section of the catalo entitled: Bachelor of Science Degree in Arts and Sciences and to the section entitled General Requirements for the Bachelor of Arts and Bachelor of Science Degree

## SPECIFIC REQUIREMENTS

For specific outline of courses in the engineering curricula including recommended electives to fulfill the requirements for general education, refer to Engineerin in the section entitled: Announcement of Courses.

# HOME ARTS CURRICULUM

The Home Arts curriculum is designed to meet the needs of those student who wish to apply their knowledge to the various problems of home living. This curriculum is based on the *general major* in arts and sciences with a field of concentration i Home Economics combined with two other fields to be selected by the student in consultation with the home arts adviser and the Dean of Instruction. (Refer to the General Major in the section of the bulletin entitled: Bachelor of Arts Degree.) By appropriate selection of courses, the student may prepare for several related fields, suc as radio, community recreation, home service in industry, merchandising, and socia work.

| *Summary of unit requirements:* | *Unit* |
|---|---|
| General education | 4 |
| Preparation for the general major | 2 |
| General major (upper division) | 3 |
| Electives | 1 |
| Total units required for graduation | 12 |

*Specific requirements for the major:* Lower division: Home Economics 1, 5, 10 55, 61A-61B; Sociology 50 and 51; six lower division units in a third field. Uppe division: 15 upper division units to be selected from Home Economics 100, 101, 105 135, 150, 160A-160B, 170, with the approval of the adviser in home arts; nine uppe division units to be selected from a second field; and 12 upper division units to b selected from a third field. A minimum of six lower division units is usually required i each field of the general major as preparation for upper division work.

Students should consult with the adviser in the home arts curriculum for selection and arrangement of courses.

## INTER-AMERICAN RELATIONS

This curriculum, designed around the general major, provides (1) a basis for a
ore effective understanding of the opportunities and problems of international rela-
ions in the western hemisphere; (2) facilities for a basic education and training for a
usiness or professional career involving international relations; (3) undergraduate
reparation for the comprehensive examinations required for appointment in the
oreign Service, Department of State.

High school students preparing to enter this area of Foreign Service should
clude in the high school program three years in one foreign language, preferably
panish.

Students should consult with the adviser in Inter-American Relations regarding
n appropriate program of studies.

## JOURNALISM CURRICULUM

The purpose of the journalism curriculum is to prepare students for positions
n mass communications media and to offer to teacher candidates background for
ducational work in journalism. The four-year program contemplates that in addition
professional training, majors shall acquire a broad background in such related
elds as English, sociology, psychology, political science, economics, and history. All
ajors are required to take survey courses in newspaper and radio techniques and
hotography. Introductory courses in mass communications research are offered. The
rogram is so designed that during the final two years, majors may take specialized
ork in newspaper reporting and editing, magazine writing, advertising and radio
roduction. Producing the campus newspaper serves as a laboratory for students.
rrangements are made for students to serve internships on daily and weekly news-
apers, industrial magazines and radio stations.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 11–14 |
| Major (upper division) | 24 |
| Electives | 41–44 |
| Total units required for graduation | 124 |

*Specific requirements for the major:* Lower division: Journalism 51A-51B,
ournalism 50, Speech Arts 81, and Business 2A, or proficiency in typing. Upper
ivision: 24 upper division units in journalism including Journalism 102 and 151.
minor is not required.

## LABORATORY TECHNIQUE CURRICULUM

The laboratory technique curriculum is offered with the B.S. degree. This cur-
culum, with modifications for the types of licensures, is provided to satisfy the
ademic requirements to qualify for the examinations given by the State of Cali-
rnia Public Health Department for Public Health Bacteriologist, Clinical Laboratory
echnician, and Medical Technologist. If the curriculum outlined by this College is
llowed, only six months of apprenticeship are required to complete the qualifications
r the licensing examinations for Public Health Bacteriologist and Clinical Laboratory
echnician. Five years of experience as a Clinical Laboratory Technician are necessary
qualify for the examination for licensure as a Medical Technologist.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major required for State licensure exclusive of General Education courses | 23–37 |
| Major (upper division) | 36–44 |
| Electives | 2–24 |
| Total number of units for graduation | 128 |

*Specific requirements for the major:* Lower division (including courses in General Education, but required for licensure): Chemistry 1A-1B, * Chemistry 5, Biology 3 and 4 or Zoology 1A-1B, Bacteriology 1 or 101, Physiology, 1A and 1C, * Physics 2A and 3A. Upper division: 36 upper division units, including Chemistry 101A, *Chemistry 114A-114B, Bacteriology 102, 103 and one or more courses selected from Bacteriology 105, 106 or 107, * Zoology 109, Zoology 128, 104, 126, and 108, and additional electives to complete the major. Twelve units of science courses in the major field may be counted as general education in natural science.

Students should consult with the adviser in the Laboratory Technique Curriculum for selection and arrangement of courses.

## PRELEGAL CURRICULUM

The entrance requirements of schools of law range from two years to three and four years of prelegal work. The lower division requirements of the arts and sciences curricula should be met in full whether the prelegal curriculum extends over a period of two, three, or four years.

The following curriculum is designed to meet the recommendations of standard American schools of law for a broad and liberal education. For the majority of pre-legal students a general major with concentration in economics, political science, and history, or a major-minor combination in these fields will constitute the most effective preparation for later professional study in law and for later activities in the field of business.

*Preparation for the major:* Lower division: Business 14A-14B, Economics 1A-1B, Political Science 71A-71B or 1A-1B, and a year-course in history. Recommended: six units from Philosophy 1A-1B, 3A-3B, or 20. Twelve units from courses in this lower division sequence may be applied toward general education requirements.

### Upper Division

In the junior and senior years the student will plan his course with the counsel of his adviser in terms of the field of law in which he plans to work, but keeping in mind the entrance examinations and other requirements for admission to schools of law. The course selected will be drawn from the preferred and recommended lists below. Optional courses, that is courses not found in the preferred and recommended lists, may be taken to satisfy the general major pattern requirement, but only with the consent of the student's prelegal adviser. These courses are not to be considered as general electives.

The student must complete a master plan approved by the prelegal adviser and filed with the Registrar.

*Preferred List*

Economics 133, 150, 151, 170.
History 151A-151B, 172A-172B, 175A-175B.
Philosophy 121, 129.
Political Science 139A-139B.
Psychology 145.
Sociology 173, 174.

*Recommended List*

Economics 102, 110, 111, 128, 131, 135, 142, 171, 172, 185, 190, 195.
English 106, 120, 126A-126B, 129, 131, 192.
History 111A-111B, 121A-121B, 143A-143B, 175A-175B, 179A-179B, 181A-181B.
Philosophy 101, 111A-111B, 130.
Political Science 105, 111A-111B, 120, 121, 122, 140A, 140B, 142, 143, 150A-150B, 152, 153, 154, 158A-158B, 198.
Sociology 152, 170, 174, 187.
Speech Arts 162, 191, 192.

## LIFE SCIENCE MAJORS

Within the life science majors, curricula are offered for the fields of entomology, fish and game, plant quarantine, and wild life. Requirements for these curricula are the same as for the B.S. degree in zoology or in botany; the specialization for a particular occupation lies within the upper electives of the B.S. degree program.

Students in high school planning to enter any of these life science curricula should include in the high school program the following subjects: Elementary algebra, plane geometry, intermediate algebra, trigonometry, chemistry, and physics. Three years of French or German recommended.

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* These courses are not required for the Public Health Bacteriologist license.

Courses in the field of specialization may be selected from the following: Bacteriology 101; Botany 102, 105, 107, 119, 126; Chemistry 101A; Economics 140 or Psychology 104; Political Science 140A-140B; and Zoology 101, 104, 110, 113, 115, 118, 119, 121, 122, 125, 126, 128, 153, 158.

Students should consult with the adviser in the life science curricula for selection and arrangement of courses.

## PREMEDICAL CURRICULUM

The entrance requirements of medical colleges ordinarily range from three to four years of premedical work. The lower division requirements of the liberal arts curricula include the general requirements of standard medical colleges and should therefore be met in full whether the curriculum extends over a period of three or of four years. All plans for premedical work should include an arrangement of courses to meet the requirements of the medical college which the student expects to enter.

Students ordinarily elect to concentrate in chemistry and zoology with a major in one and a minor in the other. Requirements for these majors and minors are described under these departments.

High school students planning to enter medicine should include in the high school program the following subjects: Elementary algebra, plane geometry, intermediate algebra, chemistry, physics, two or three years of French or German. Two years of Latin also recommended.

Course of study for premedical curriculum in addition to general education requirements:

Freshman year: Chemistry 1A-1B, Zoology 1A-1B or Physics 2A-2B, 3A-3B.

Sophomore year: Chemistry 5A, Physics 2A-2B, 3A-3B or Zoology 1A-1B, and foreign language.

Junior year: Chemistry 101A-101B, foreign language to 12 units, Zoology 100 and 106.

Senior year: Completion of requirements for graduation with a major preferably in chemistry or zoology.

Students should consult with the adviser in the premedical curriculum for selection and arrangement of courses.

## NURSING CURRICULUM

It is anticipated that by fall, 1953, a four-year curriculum leading to the bachelor of science degree in nursing will be introduced in the Division of Life Sciences. Specific requirements for this curriculum will be announced later.

## PERSONNEL MANAGEMENT CURRICULA

A student desiring to prepare for personnel management may follow one of the three plans outlined below. Emphasis is placed on different areas, depending upon the vocational objective. A student preparing for graduate work in personnel management should consult with the adviser in his selected field in choice and arrangement of courses. Courses in the major are in addition to 45 units in general education courses.

*Personnel Management:* This curriculum includes work in three fields: business, economics, and psychology. Lower division requirements: Business 14A and 20, Psychology 6, and Economics 1A-1B (15 units). Upper division requirements: Business 121, 153, 154, 198A; Economics 150, 151, 185; Psychology 104A, 105A, 121, 131, 152 (36 units). Other courses in business may be substituted for Business 14A and 198A on the basis of individual counseling. Four additional upper division units must be completed for graduation. It is recommended that these units and additional electives be chosen from the following: Business 186; Psychology 104B, 122, 132; Sociology 110, 170, 185; Political Science 71A, 71B and 143.

*Public Personnel Management:* This curriculum includes work in three fields: political science, economics, and psychology. Lower division requirements: Political Science 71A-71B, Economics 1A-1B, and Psychology 6 (15 units). Upper division requirements: Political Science 140A-140B or 147A-147B, 144, 145, 146, 198; Economics 150, 151, 185; Psychology 104A, 105A, 121, 131, 152 (36 units). Another political science course may be substituted for Political Science 198 on the basis of individual counseling. Four additional upper division units must be completed for graduation. It is recommended that these units and additional electives be chosen from the following: Business 121; Economics 131; Political Science 142, 143.

*Pre-Industrial and Personnel Psychology:* This curriculum is offered under tl major in psychology. For details, refer to Psychology in the section of the bulletir Announcement of Courses.

## PREPHARMACY CURRICULUM

Some colleges of pharmacy offer a four-year curriculum, others a six-year cu riculum of pharmacy. Students should ascertain the extent and requirements of th curriculum of the college of pharmacy they expect to enter. Colleges of pharmacy whic offer the four-year curriculum normally permit not more than one year of credit i time for work completed in an institution other than a college of pharmacy. Colleges c pharmacy which offer a six-year curriculum normally permit not more than two year of credit in time for work completed in an institution other than a college of pharmac California state law requires that an applicant for the State Board Examination i Pharmacy must be a graduate of a recognized college of pharmacy which requires resident attendance of not less than four years.

The high school program should include the following subjects: Elementar algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; trigonometry ½ unit; chemistry, 1 unit; physics, 1 unit; foreign language, 2 units.

At San Diego State College the following prepharmacy curricula are offered:

*Course of study for the four-year curriculum:* Freshman year, physical educa tion activities, English 1 and a literature course, Chemistry 1A-1B, Zoology 1A-1B Botany 1, Mathematics 3A or 1, and electives (32 units).

*Course of study for the six-year curriculum:* Freshman year same as for th four-year curriculum. Sophomore year, physical education activities, foreign languag if needed, social science including U. S. history and Constitution courses, Physic 2A-2B and 3A-3B, Psychology 1, Health Education 21, and electives (32 units).

Students should consult with the adviser in the prepharmacy curricula for selec tion and arrangement of courses.

## PUBLIC ADMINISTRATION CURRICULUM

The program of training in public administration can be obtained by completion of the occupational major in public administration or through a major in political science. In either case, the student will follow a sequence of work dealing with the principles and problems of organization for the carrying out of the functions of government, and public management. This latter aspect deals primarily with the directing and coordinating of work operations, the staffing of public agencies, the processes of budgeting and financial control, and the dynamics of management, namely planning, research, communications, leadership and human relations in the administrative process.

The public administration curriculum may be adapted to several goals, one being the taking of junior administrative examinations for entrance into the government service at the local, state or federal levels, and preparation for advancement up the governmental ladder. It is designed also to prepare students for graduate work in public administration.

Selected students may participate in an internship program in local government offices. Working under the close supervision of governmental officials and the adviser in public administration, the intern deals with actual administrative procedures and problems in government.

### Occupational Major

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 12 |
| Major (upper division) | 36 |
| Electives | 31 |
| Total units required for graduation | 124 |

*Specific requirements for the major:* Lower division: Political Science 71A-71B, Economics 1A-1B. Upper division: 36 upper division units, including Political Science 140A-140B, 198, Economics 131, and 140.

Students planning to enter public administrative fields should consult with an adviser in public administration.

### Minor

A *minor in public administration* is offered in arts and sciences for students majoring in fields other than political science or public administration. This minor onsists of Political Science 71A-71B, 140A-140B, and three units of upper division work selected from Political Science 198, Internship in Government Administration, or other political science course.

### Certificate Programs in Public Administration and in Social Work Administration

*Certificate in Public Administration:* Admission to candidacy for the Certificate n Public Administration is open to all public service employees without reference to revious academic experience. Candidacy will be established by approval of the Coordinator of Public Administration. To receive the Certificate in Public Administration, the candidate must complete an approved pattern of eight courses, with a grade point average of 1.5.

*Certificate in Social Work Administration:* Admission to candidacy for the Certificate in Social Work Administration will be established by approval of the Coordinator of Public Administration. To receive the Certificate in Social Work Administration, he candidate must complete an approved pattern of 30 units in courses at San Diego State College with a grade point average of 2.0. Prerequisites for admission to candidacy are 20 units in approved social science courses.

Candidates for the certificate programs may obtain further information on equirements by writing to the Coordinator of Public Administration, San Diego State College.

## RECREATION CURRICULUM

The curriculum in recreation is designed to provide a program of training for recreation and camp leadership, work with youth groups, and related activities.

| *Summary of unit requirements:* | *Units* |
|---|---|
| General education | 45 |
| Preparation for the major | 20–22 |
| Major (upper division) | 36 |
| Electives | 21–23 |
| **Total number of units required for graduation** | 124 |

*Specific requirements for the major:* Lower division: Sociology 50 and 51; Physical Education 53. In addition, men are required to complete Physical Education 64. Women must include Physical Education 2A, 4, 5, and 6. Required in related fields: 12 units selected from the fields of art, industrial arts, music, physical education, and speech arts, with a maximum of five units in any one field. Courses in related fields which are designated as general education courses may be applied toward general education requirements. Upper division: 36 units distributed as follows: Recreation 165, 170A-170B, 184A-184B; Psychology 106, 145; Education 174; Physical Education 151; Political Science 143; nine units selected from Sociology 110, 174, 185, 187, 190. Four additional upper division units in electives are required to complete the 40 upper division units for graduation.

Students should consult with the adviser in the Recreation Curriculum for selection and arrangement of courses.

## SOCIAL SERVICE CURRICULUM

### (PRESOCIAL WORK)

The professional curriculum in social service prepares for admission to graduate work in recognized American schools of social work. This curriculum should be pursued by those who plan careers in federal, state and local welfare work; social work in public schools including preparation for a teaching credential; family and children's private case work agencies; social settlement work; county probation work; child welfare agencies; statistical and investigational work in private and public agencies; work in public institutions for the defective and delinquent; medical social service and psychiatric social work in hospitals and clinics; executive positions in social worl and social work in numerous other organizations.

The lower division requirements of the arts and sciences curricula include the ge eral requirements of recognized professional schools of social work and should therefo ordinarily be met in full. The courses indicated below meet the requirements for tl general major. For description of the general major, refer to the section in the bullet on the bachelor of arts degree in arts and sciences.

*Summary of unit requirements:*

| | Units |
|---|---|
| General education | 45 |
| Preparation for the major | 21 |
| Major (upper division) | 38 |
| Electives | 20 |
| Total number of units for graduation | 124 |

*Specific requirements for the major:* Lower division: Sociology 50 and 51, Ec nomics 1A-1B, Political Science 71A-71B or 1A-1B, and Psychology 11 (21 units Biology 1 or 3 and 4 should be taken as general education courses in natural scienc Recommended: courses from anthropology, foreign language, and speech arts. Uppe division requirements: Sociology 103, 187, 190, and an upper division elective (1 units); Economics, nine units selected from 102, 131, 150, 170, 185, 195; Politic Science, six units selected from 140A, 140B, 142, 143; Psychology 145, 150, and 15 or 152 (nine units); Zoology 165 or 155 (two units). An additional two units in uppe division electives must be taken to complete the 40 upper division units required fo graduation. Twelve units of social science in the major field may be counted as genera education in social science.

Students should consult with the adviser in the social work curriculum fo selection and arrangement of courses.

### Certificate in Social Work Administration

A certificate in Social Work Administration is available to persons professionall engaged in the field of social work. This program is described under the Publi Administration Curriculum.

# ANNOUNCEMENT OF COURSES

## COURSE NUMBERS

Courses numbered from 1 to 99 are lower division (freshman or sophomore) courses; those numbered 100 to 199 are upper division (junior or senior) courses; those numbered 200 to 299 are graduate courses (see section on Admission and Registration for information concerning eligibility to enroll in these courses) those numbered 300 to 399 are professional education courses to be taken at the graduate level.

## CREDIT FOR UPPER DIVISION AND GRADUATE COURSES

A student with lower division standing is not eligible to take upper division courses, with the following exceptions: A student in the last semester of his sophomore year who is approaching upper division standing must carry sufficient lower division units to complete the required minimum of 60 units may carry upper division units for the remainder of his study load. A student with sophomore standing may carry upper division courses for upper division credit provided that he has the written approval of the chairman of the department and the Dean of Instruction. This written approval must be filed in the Office of the Registrar on the form "Adjustment of Academic Record." Blank forms may be obtained by the student at the Office of the Registrar.

Graduate credit for courses numbered 200 to 299 is limited to students with graduate status. (See Admission to Graduate Study in section on Admission and Registration.)

## GENERAL EDUCATION COURSES

Course numbers preceded by an asterisk (*) are general education courses which may be applied toward the 45 unit requirement in general education, unless specifically required as part of the major. Refer to the list of general education courses in the section of the bulletin entitled: General Requirements for the Bachelor of Arts and Bachelor of Science Degrees.

## UNITS

Figures in parentheses indicate the unit value of the course.

One "unit" represents 50 minutes of recitation or lecture, together with the required preparation, or three hours laboratory work each week for a semester of 18 weeks.

## SEMESTER IN WHICH COURSES ARE OFFERED

Roman numeral I indicates course is offered in Fall semester. Roman numeral II indicates course is offered in Spring semester.

Following the course title are designations of credit and the semester in which course is offered. Examples:

(3) I____________________________________Three units. Offered first semester

(3) I, II_______________Three units. Offered first semester and second semester

(3-3) Year, I
Three units each semester. Year sequence beginning in the first semester

(3-3) Year, I, II
Three units each semester. Year sequence beginning either semester

Although the college fully expects to carry out the arrangements planned in the list of courses, it reserves the right to make changes. Classes in which the enrollment does not come up to the minimum number set by the State Department of Education may not be offered or may be postponed.

### PREREQUISITES

Prerequisites for courses are stated. A student should not enroll in a course f which he is not eligible.

Admission to all graduate courses requires graduate status and permission of t instructor.

# AESTHETICS

## IN THE DIVISION OF FINE ARTS

Major or minor work is not offered in aesthetics; however, certain courses i this field are required as part of the majors in art and in music. For specific inform tion, refer to these departments.

### Lower Division Courses

*** 2. Introduction to Music** (3) I
Practical approach to hearing music with understanding and pleasure, throug study of representative compositions of various styles and performance media, grea musicians and their art. Music correlated with other arts through lectures, recording concerts. Closed to music majors or minors.

*** 5. Art Orientation** (2) II
An illustrated lecture course dealing with aesthetic meaning and its relatio to the structure of art products. Designed to increase both understanding and appre ciation of the visual world in general and of the fine arts in particular.

*** 50. Appreciation and History of Art** (2) I
A survey of art development in the painting, sculpture, architecture, and handi crafts from dawn of art to the Renaissance. Illustrated.

*** 51. Survey of Mexican Art** (2) I
A study of Mexican and Middle American Art from earliest time to present.

**52A-52B. Survey of Oriental Art** (3-3) Year, I
A study of the art of the great cultures of the Orient. (52A is a prerequisit for 52B.)

### Upper Division Courses

*** 102. Great Music** (3) II
Instrumental and vocal music in the larger forms studied through directe listening. Artistic trends and their effect upon music composition and performance. N prerequisite, but completion of Aesthetics 2 recommended. Not open for credit to musi majors. Formerly Aesthetics 100.

*** 138. Introduction to Aesthetic Appreciation** (1) I
Major forms of expression and aesthetic experience in art, music and literature, presented by an interdepartmental staff through lectures, demonstration, and panel discussions. Not open to students with credit for Comparative Literature 138.

*** 150. Appreciation and History of Art** (2) II
The period from the Renaissance through the modern school treated in the same manner as in Aesthetics 50.

**160. Techniques and Procedures of the Art Museum Worker** (3) I
Designed to acquaint the student with the nature and function of the art museum in the community and to give him experience in the methods by which it serves the public. Prerequisite: Aesthetics 5 or 50 and 150.

*** 162. History and Philosophy of the Dance** (2) I
A study of the historical background of the dance, with special emphasis upon its development in America and its present status in education and the creative arts. Not open to students with credit for Physical Education 162.

# AIR SCIENCE

## IN THE DIVISION OF AIR SCIENCE AND TACTICS

### Air Force Reserve Officers' Training Corps

The Department and Division of Air Science and Tactics at San Diego State College offers the curriculum prescribed by the Air Force Reserve Officers' Training Corps. This curriculum consists of a four-year course, including a two-year basic course and a two-year advanced course.

The objectives of the Air Force ROTC program are the development of qualities of leadership and character essential to civil and military responsibility and the training of officer reserve personnel. Completion of the four-year course and a bachelor's degree leads to commission in the Air Force Reserve. Students who have demonstrated outstanding qualities of scholarship and leadership may receive regular commissions in the Air Force.

Flight training is not offered as part of this program; however, Air Force ROTC graduates have a high priority for such training and, if accepted, serve as reserve officers on active duty during the training period.

*Eligibility:* A regularly enrolled male student is eligible for admission to the basic course if he is a citizen of the United States, not less than 14 years of age and has not reached his 23d birthday, and is physically qualified for military training. For admission to the advanced course, the student must not have reached his 25th birthday and must have completed the basic course or its equivalent. At the discretion of the Professor of Air Science and Tactics, up to two years of pattern credit in the basic course may be allowed for prior active service in the armed forces. Normally, a student entering the advanced course must have two years of college work remaining. The applicant must pass required screening tests and be selected by the Professor of Air Science and Tactics and the President of the College.

Attendance at one summer camp is required of each student to qualify for the commission. The summer camp is six weeks in length and is held at an active Air Force base. The student receives $75 per month during this training period. Uniforms, equipment, subsistence, and transportation are furnished by the Air Force.

Students in the basic and advanced courses are furnished uniforms, equipment, and textbooks for military science. Students in the advanced course are given, in addition, commutation of subsistence allowance of approximately $27 per month. Upon acceptance of this allowance, the student executes a written agreement with the United States Government and with the President of the College to complete the advanced course, completion of such course becoming a prerequisite to graduation.

### Basic and Advanced Courses

The basic course requires three hours of instruction and drill per week each semester. The advanced course requires five hours. In addition, each student in the advanced course must attend one summer camp of six weeks. The basic course is designed to interest the student in national problems and the Air Force. The advanced course prepares the student to assume the duties and responsibilities of junior officers in the U. S. Air Force. Students enrolled in the AFROTC program pursue their regular courses of study in fields of their choice. Major work is not offered in air science and tactics, but a minor is offered.

### Minor

A *minor in arts and sciences* is offered in *air science and tactics.* The minor consists of 15 to 20 units in air science and tactics, six units of which must be in courses carrying upper division credit.

### Lower Division Courses

**1A-1B. First-Year Basic Air Science** (2-2) Year, I

Two hours of classroom instruction and one hour of drill per week. Introduction to the AFROTC program; moral and statutory obligations for military service; introduction to aviation; fundamentals of global geography; international tensions and security organizations; instruments of national military security; drill in basic military training.

**21A-21B. Second-Year Basic Air Science** (2-2) Year, I

Two hours of classroom instruction and one hour of drill per week. A course that develops the purpose, processes, and primary elements of aerial warfare; the mission of the Air Force and the media for its accomplishment; career guidance; drill in cadet noncommissioned officer training.

### Upper Division Courses

**131A-131B. First-Year Advanced: General Technical** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. A course that introduces command and staff concepts in the Air Force; basic problem solving techniques, fundamental communication processes, and principles of learning and teaching; military courts and boards; elements of applied Air Science; the Air Force base; leadership laboratory.

**133X. First-Year Advanced** (3) Summer Camp

A six-week camp required of all advanced students; normally completed between junior and senior year. Credit granted through the Extension Division on basis of individual student application with approval of the Professor of Air Science and Tactics.

**142A-132B. Second-Year Advanced: Administration and Logistics** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. Purpose and basic functions of the staff, administration of personnel at wing-base level, functions of Comptroller and Food Service Supervisor.

**143A-143B. Second Year Advanced: Flight Operations** (3-3) Year, I

Four hours of classroom instruction and one hour of drill per week. Advanced instruction in navigation and bombing and the theory of radar as applied to both.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## ANTHROPOLOGY

### IN THE DIVISION OF SOCIAL SCIENCES

Major work is not offered in anthropology; however, courses in anthropology may be included as part of a general major or social science major. Students wishing to use anthropology as a field of concentration in the *general major* should include the following courses in the lower division: Anthropology 1A-1B, 2 or 3; Geography 1, 2 or Geology 1A-1B; Sociology 50, 51; recommended: Spanish or German. The following supplementary fields of study are recommended in the upper division with a view to later specialization in anthropological work: For *archaeology:* art, geography, geology; for *physical anthropology:* psychology, statistics, and zoology; for *museum work:* art, education, and psychology. For further information on the *general major*, refer to the section on the Bachelor of Arts Degree.

Courses in anthropology may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to the outlines of the requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in anthropology. The minor consists of 15 to 22 units in anthropology, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in anthropology for the general secondary credential; however, anthropology may be used as a part of the *social science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the requirements for the teaching minor for these credentials.

### Lower Division Courses

*** 1A-1B. General Anthropology** (3-3) I

Origin and antiquity of man. Theories of human descent. Classification of races. Origin and early development of civilization.

**2. Physical Anthropology** (3) I

An introduction to the studies of primatology and anthropometry. The comparative anatomy of the monkeys and great apes, the emergence of the anthropoids, the reconstruction of early man from fossil evidence. The landmarks, measures and indices used in the metrical study of the living human body and skeletal material. Sexual differences and growth changes in the skull and skeleton. Medico-legal applications.

**3. Survey of Archaeology** (3) II

A review of the history of modern archeology and a discussion of its methods. The development of archaeological techniques in reconstructing the ancient cultures of the Mediterranean world. The problems of present day archaeology in the Near East, the Orient and the Americas. The principles and basic techniques used in the excavation of sites and the reporting of findings.

*** 54. Social Anthropology** (3) II (Not offered in 1952-53)

An anthropological study of social institutions in primitive and civilized societies. The evolution of family organization, religion, property right, and government traced in elementary and advanced civilization.

### Upper Division Courses

**151A. The North American Indian** (3) I

Pre-Columbian cultures of the North American Indian. The origin and migration of New World peoples. Industries, arts, crafts, social organization, religion and other phases of American Indian civilization.

**151B. Indian Civilization of Middle America** (3) II

The development of civilization in Pre-Columbian Mexico and Central America: Aztec, Mayan, and related cultures.

*** 152. World Ethnography** (3) I (Not offered in 1952-53)

The cultural patterns of representative aboriginal peoples. Industries, arts, social organization and supernaturalism considered with a view to environmental adjustment, historical development and functional interrelation. Ethnological theories reviewed and applied in interpreting illustrative aboriginal societies.

**153. Primitive Religion** (3) II (Not offered in 1952-53)

Beliefs and ritual of primitive man. Magic and religion. Forms of animism and polytheism. Primitive mentality and the supernatural.

**161. The California Indian** (3) Summer

A survey of native California Indian culture with stress on the Indian groups of Southern California. The industries, arts, social organization, folklore and religion will be considered as revealed through the study of living peoples and archaeological evidences.

*** 165. Ethnology and Race Psychology** (3) I (Not offered in 1952-53)

The biological basis of race, somatic and serologic typology, racial mentality, tests and their ethnopsychological significance, abnormality in ethnic groups. Race and culture; ethnic aspects of demography.

**172. Indian Cultures of the Southwest** (3) Summer

Indian cultures of the past and present in the Southwestern states. Arts, crafts, architecture and religion as revealed through archaeology and ethnology.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## ART

### IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is offered in *art* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Every student who plans to major in art, whether in arts and sciences or in the teacher education program, must complete the following basic courses: Required in the major: Art A (or high school equivalent), Art B, 6A-6B, and 14A. Required in general education: Aesthetics 5 or 51 and 50.

In arts and sciences the student majoring in art may choose either a group of courses in which the crafts are emphasized or a group of courses in which the graphic arts are emphasized. One of the following plans should be selected:

*Emphasis on crafts:* The student should add to the list of basic courses required of all art majors the following courses in the major: lower division: Art 6D, 7, 61B and two units of art electives; upper division: Aesthetics 150, Art 106A or B or C, 106D, 111A, 117A-117B, 119A-119B, and eight units of art electives. This program leads in the direction of industrial design, interior design, cabinet making, sculpture, weaving, textile design, ceramics, etc.

*Emphasis on graphic arts:* The student should add to the list of basic courses required of all art majors the following courses in the major: lower division: Art 15A, 16A, and four units of art electives; upper division: Aesthetics 150, Art 106A or 106B, 112A-112B, 115A-115B, 116A-116B, 117A, and six units of art electives. This program leads in the direction of illustration, portraiture, landscape painting, mural design, poster design, production illustration, advertising design, fashion design, etc.

Art majors are not required to complete a minor.

A *teaching major in art* is offered for the general secondary and special secondary credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *art*. The minor consists of 15 to 22 units in art, six units of which must be in courses carrying upper division credit.

A *teaching minor* is offered in *art* for the general secondary credential. Art may be offered only as a second minor for the general elementary and kindergarten-primary credential. For statement of requirements, refer to these credentials.

### Art Appreciation, History and Orientation

For courses in appreciation, history of art, and art orientation, see aesthetics. Many students, regardless of the field in which they may be majoring, recognize the need for an intelligent approach to the subject of art and art appreciation. However, due to the erroneous popular feeling that art is a subject requiring "talent," these students may refrain from enrolling in art courses. For students who desire a better understanding of art, but who do not hope to acquire any of the art skills, the following courses are recommended.

| | *Units* |
|---|---|
| Aesthetics 5, Art Orientation | 2 |
| Aesthetics 50, History and Appreciation of Art | 2 |
| Aesthetics 51, Survey of Mexican Art | 2 |
| Aesthetics 52A-52B, Survey of Oriental Art | 6 |
| Art 8, Costume and Home-furnishing | 2 |

Other courses which require certain skills but which are not beyond the ability of the average college student are:

| | |
|---|---|
| Art 61B, Crafts | 2 |
| Art 6A, Design | 2 |
| Art A, Drawing and Composition | 2 |
| Art 94, Costume design | 2 |

### Lower Division Courses

**Art A. Drawing and Composition** (2) I, II

Problems involving perspective to develop ability to draw still life, furniture, exteriors, interiors, and the like. (High school equivalent may excuse the student from this course.)

**Art B. Drawing and Composition** (2) I, II

Drawing of mechanical and natural forms by the use of line and value. Emphasis on proportion and structure. Some quick sketching, gesture and contour drawing. Prerequisite: Art A.

***6A. Design** (2) I, II

Fundamentals of design and composition and theory of color. Basic course used as a prerequisite for all advanced work.

**6B. Design** (2) I, II

Original work in creative design and representation with special stress on modern tendencies. Prerequisite: Art 6A.

**6D. Furniture Design** (2) I, II

Study of the principles of design through the making of furniture. Prerequisite: 6A.

**7. Line, Color and Display** (2) I, II
The principles of line, color and arrangement applied to store and window display. Study and observation of windows, color and materials used in display. Building models and practical problems in arranging colors, textures, and forms in windows to fit different kinds of merchandise. (Students taking this course for upper division credit, Art 107, will be required to do additional work.)

***8. Costume and House Furnishings** (2) I, II
An appreciative study of modern architecture and modern house furnishings, with emphasis on the spirit of gracious living and an appreciative study of the modern dress with emphasis on suitability to the figure, the personality and the occasion.

**14A. Lettering** (2) I
Fundamental art principles applied to lettering. Practice for quick, accurate lettering; original problems using letters as design. Prerequisite: Art 6A.

**14B. Posters and Commercial Art** (2) II
The application of lettering to posters, newspaper and magazine advertising, and other forms of commercial art. The study of composition combined with lettering and special study of modern tendencies in publicity. Prerequisites: Art 6A, 14A.

**15A-15B. Life Drawing** (2-2) Year, I, II
Drawing from the nude model. Prerequisite: Art A-B.

**16A-16B. Painting** (2-2) I, II
Semester I: Composition of still life in oil. Semester II: Landscape and more advanced composition in oil. Prerequisite: Art A-B.

**17A-17B. Sculpture** (2-2) I, II
Creative design in such materials as clay, wood, stone, concrete, etc. Prerequisites: Art 6A-6B.

**61A. Crafts in the Elementary Schools** (2) I, II
A foundation course which develops unification of work of the elementary grades through activities and experiences. These experiences grow out of environmental activities. They include study and working of clay, lumber and tools, textiles, and cardboard construction. Prerequisite: Art 6A.

**61B. Crafts** (2) I, II
Problems involving the application of design principles to various fields—pottery, textiles, weaving, metal work, wood-carving, and book-binding. Prerequisite: Art. 6A.

**94A-94B. Costume Design** (2-2) Year, I, II
Original designs of modern costumes suitable to the individual or to distinct types; the drawing of fashion figures; the rendering of fabrics and textures. Prerequisite: Art 6A.

**95A-95B. Interior Design** (See Art 195A-195B)

## Upper Division Courses

**106A-106B. Printmaking** (2-2) I, II
Study of print crafts which includes the making of linoleum blocks, wood engravings, etchings and lithographs. Prerequisites: Art A. B. 6A.

**106C. Illustration** (2) II
Same as 106A-B except that printmaking is applied to problems of book illustration. Prerequisites: Art A, B, 6A.

**106D. Advanced Furniture Design** (2) I, II
(See Art 6D) Prerequisite: Art 6D.

**107. Advanced Line, Color and Display** (2) I, II
(See course description under Art 7)

**111A-111B. Industrial Design** (2-2) Year, I, II
Design of objects for manufacture with reference to their use, materials, and in accordance with factory practices and machine techniques. Practice in the techniques of presentation, working drawings, renderings in perspective and scale models. Prerequisite: Art 6A-6B.

**112A. Design and Composition** (2) I
Structure in picture making. The controlled use of line, value, color, and texture to organize the effect of depth, movement, volume, etc., in the recognizable image. Oil technique. Prerequisites: Art A-B, 6A-6B.

**112B. Design and Composition** (2) II
Continuation of Art 112A. Prerequisite: Art 112A.

**115A-115B. Life Drawing and Painting** (2-2) I, II
Drawing and painting from nude and costume models. Prerequisite: Art A-B.

**115C-115D. Advanced Life Drawing and Painting** (2-2) Year, I, II
Study of human figure in terms of form patterns. Prerequisite: Art 115A-115B.

**116A-116B. Advanced Painting** (2-2) Year, I, II
Painting in oil from still life, landscape, or models, stressing composition. Prerequisite: Art 16A or 16B.

**117A-117B. Advanced Sculpture** (2-2) Year, I, II
Creative design in such materials as clay, wood, stone, concrete, etc. Prequisites: Art 6A-6B and 17A or 17B.

**119A. Ceramics** (2) I
Building of pottery on the basic techniques of coil, slab, mold making, and slip casting. Ceramic sculpture, glazing and kiln operations: Art 6A.

**119B. Ceramics** (2) II
Study of glazes and elementary clay technology. Mold making, slip casting with application to individual creative problems. Prerequisite: Art 119A.

**120A-120B. Advanced Design** (2-2) Year I, II
Advanced work in pure design, two and three dimensional. Re-examination of color theory and design principles. Prerequisites: Art A-B, 6A-6B.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**194A-194B. Costume Design** (2-2) Year, I, II
For description, see Art 94A-94B. Prerequisite: Art 6A.

**195A-195B. Interior Design** (2-2) I, II
The consideration of the house as a unit; the arrangement of garden, house, floor plan, and furniture as functional and decorative problems. Prerequisite: Art A and 6A; 195A is a prerequisite for 195B.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## Graduate Courses

**200A-200B. Special Problems** (2-2) I, II
A graduate course in which students may carry out projects in various fields of art under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply for work within a certain field after discussions with the art faculty.

**290. Bibliography** (1) I, II
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Pererquisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis or Project** (3) I, II
Guidance in the preparation of a project or thesis for the master's degree.

# ASTRONOMY

## IN THE DIVISION OF PHYSICAL SCIENCES

Major work is not offered in astronomy. Students desiring to prepare for advanced work in astronomy should include the following courses: Astronomy 1, 2, 3, 9, and 10; Mathematics 3A-3B, 4A-4B; Physics 4A-4B-4C; a reading knowledge of French and German.

Courses in astronomy may be used as part of the general science major for the general junior high school credential. For specific information, refer to the outline of requirements for the general science teaching major for this credential.

### Minor

A *minor in arts and sciences* is offered in astronomy. The minor consists of 15 to 22 units in astronomy, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in astronomy; however, astronomy may be used as part of the *general science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

***1. Descriptive Astronomy** (3) I, II
A cultural course planned to develop an appreciation of astronomy with emphasis on the solar system. Attention is given to the methods by which astronomical knowledge has been gained. A six-inch refractor and an eight-inch reflecting telescope are available for observation.

***2. Modern Astronomy** (3) II
A study of the stellar system in the light of modern research, especially photographic and spectrographic. Prerequisite: Astronomy 1 or permission of the instructor.

***9. Practice in Observing.** (1) I, II
A course designed to supplement Astronomy 1. The course will include constellation study, use of astronomical coordinates, and descriptive observations of celestial objects with the telescope. One three-hour evening laboratory period each week. Recommended: Astronomy 1 or concurrent registration in Astronomy 1.

**10. Advanced Observational Astronomy** (1) II
A continuation of Astronomy 9. More advanced problems in observing will be taken up such as the determination of latitude by observations of Polaris, transit observations, astronomical photography, etc. One three-hour evening laboratory period each week. Prerequisite: Astronomy 9.

**12. Elementary Navigation** (3) I
A study of compass corrections, time, line of position, use of celestial coordinates, etc. A few class hours devoted to the use of tables such as H.O. 214 for the solution of astronomical triangle. One laboratory period each week. Astronomy 1 and 9 desirable.

### Upper Division Courses

***101. Principles of Astronomy** (3) I (Not offered 1953-54)
A course designed particularly to provide background for teachers. It consists of two lectures and one laboratory period each week. Students will be required to become familiar with the prominent constellations, brighter stars in the sky, and with the general characteristics of the solar and stellar system.

**103. Astronomical Optics** (2) II
This course aims to acquaint the students with the optics and methods of testing of an astronomical telescope. The course consists of one lecture and one laboratory period each week. The student is required to grind a four-inch astronomical telescope mirror. Prerequisite: Astronomy 1 or permission of instructor.

***105. Historic Development of Astronomy** (3) I (Not offered 1953-54)
A study of the more important problems and astronomical concepts in the light of their historical development. Particular attention is given to the biography and contributions of the more important astronomers, such as, Galileo, Kepler, Newton, Herschel, Bessel, etc.

**107. Method of Least Squares and Computing Practices** (3) I (Not offered 1953-54)

Fundamental principles with applications in the fields of astronomy, physics, and engineering. Prerequisite: Math 4A or equivalent.

**110. Introduction to Study of Variable Stars** (3) II

A study will be made of the various types of variable stars, their spectra, periods, methods of observing, etc. In the laboratory the light curve of several typical variables will be observed. Two lectures and one laboratory period each week. Prerequisite: Astronomy 2. Astronomy 9 desirable.

**112. Elementary Astrophysics** (3) I (Not offered 1952-53)

A lecture course in the application of physics to astronomy: Much of modern astronomical research is in the field of astrophysics. An occasional laboratory period will be substituted by appointment for the lecture period. Prerequisites: Astronomy 2 or college physics.

**113. Surveyor's Course in Practical Astronomy** (3) II

The principles of spherical astronomy adapted to the needs of engineering students. Computation and observation. Two lectures and one three-hour laboratory period each week. Prerequisite: Engineering 1A or permission of the instructor. Astronomy 1 and 9 desirable.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisites: three units in astronomy and permission of instructor.

## BACTERIOLOGY

### IN THE DIVISION OF LIFE SCIENCES

A *major in arts and sciences* is offered in bacteriology for the A.B. degree. Courses in the major are in addition to 45 units in general education courses, except that nine units in natural science may be applied toward general education requirements. Lower division requirements: in the major, Bacteriology 1; in related fields, either Biology 3 and 4, or Zoology 1A-1B, or equivalent; Chemistry 1A-1B and Chemistry 5A. Recommended: French or German, Math C and D or 7A-7B; Physics 2A-2B and 3A-3B; and Physiology 1A. Upper division requirements: 24 units in bacteriology and related fields to include Bacteriology 102, 103, Chemistry 101A, 114A, and additional courses in bacteriology. Zoology 128 and 109 are recommended as courses to be included in the major. A minor is not required of students majoring in bacteriology.

A *major in arts and sciences* is offered in bacteriology for the B.S. degree. Courses in the major are in addition to 45 units in general education courses, except that nine units in natural science may be applied toward general education requirements. Lower division requirements: in the major, Bacteriology 1; in related fields, either Biology 3 and 4, or Zoology 1A-1B, or equivalent; Chemistry 1A-1B and Chemistry 5A. Recommended: German or French, Math C and D or 7A-7B; Physics 2A-2B and 3A-3B; and Physiology 1A and 1C. Upper division requirements: 36 units in bacteriology and related fields to include Bacteriology 102, 103, four units of 105, 106, and 107; Zoology 128; and Chemistry 101A, 114A. A minor is not required for the B.S. degree.

A *teaching major* is not offered in bacteriology; however, courses in bacteriology are included in the *major in life science and general science* for the general secondary credential and the *major in general science* for the junior high school credential. For specific information, refer to these credentials.

#### Minor

A *minor in arts and sciences* is offered in *bacteriology*. The minor consists of 15 to 22 units in bacteriology to include Bacteriology 1 or 101, 102, 103, and the remainder of the units to be chosen from Bacteriology 105, 106, 107, and 199. Recommended courses to supplement the minor: Physiology 1A and 1C; Zoology 20; Chemistry 101A, 114A.

A *teaching minor* is not offered in bacteriology; however, bacteriology may be used as part of the *general science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials or as part of the *minor in life science and general science* for the general secondary credential. For specific information, refer to these credentials.

### Lower Division Courses

**1. General Bacteriology** (4) I, II

An introduction to bacteriology. Effects of physical and chemical agencies upon bacteria; biochemical activities of bacteria; microscopic examination and cultivation of bacteria; the bacteria of air, water, soil, milk and dairy products, other foods; industrial applications. Introduction to disease-producing bacteria. Two hours of lecture and six hours of laboratory per week. Prerequisite: Chemistry 1A or 2A. (Chemistry 1A-1B for minor in bacteriology.)

### Upper Division Courses

**101. General Bacteriology** (4) I, II

Lectures and laboratory work of Bacteriology 1 with additional work to be prescribed by the instructor. Prerequisite: Chemistry 1A or 2A. (Chemistry 1A-1B for minor in bacteriology.)

**102. Advanced Bacteriology** (5) I

A survey of the agents of disease and methods of host resistance. Laboratory experience in diagnosis and immunologic techniques. Two lectures and three laboratories per week. Prerequisites: Bacteriology 1 or 101, and Chemistry 101A. Recommended: Biochemistry, physiology.

**103. Serology** (4) II

A survey of the principles and techniques used in serological diagnosis of disease agents. The course is planned for students interested in research or laboratory technology. Two lectures and two laboratories per week. Prerequisites: Bacteriology 1 or 101, Bacteriology 102, and Chemistry 101A. Recommended: Biochemistry, physiology.

**105. Bacterial Metabolism** (2) II

A course to provide a basic knowledge of the principles by which micro-organisms derive energy to support the life processes. Prerequisites: Bacteriology 1 or 101, Chemistry 101A. Recommended: Biochemistry, Bacteriology 102 and 103. This course is offered every third semester.

**106. Immunology** (2) I

A lecture course dealing with the factors underlying virulence in microorganisms, and the mechanisms of bacterial infection. Specific and nonspecific antimicrobial immunity; the antigen-antibody reaction; and consideration of the immunochemistry of protein and nonprotein cell substances. Prerequisites: Bacteriology 102, Chemistry 101A. Recommended: Bacteriology 107, Chemistry 114A. This course is offered every third semester.

**107. Virology** (2) II (Not offered 1953-54)

A survey of viruses and Rickettsias as agents of disease. An introduction to virological techniques, and routes of infection with further consideration of concepts of epidemiology, diagnosis, pathology, and host-responses. Prerequisite: Bacteriology 102, 103, or equivalent.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisites: 15 units of work in the life sciences (including courses in bacteriology) with grades of A or B; and permission of instructor.

### Graduate Courses

**290. Bibliography** (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis or Project** (3) I, II

Guidance in the preparation of a project or thesis for the master's degree.

# BIOLOGY

## IN THE DIVISION OF LIFE SCIENCES

Major or minor work is not offered in biology (see bacteriology, botany, life science, and zoology); however, courses in biology may be used as part of the general science major for the general junior high school credential, or the general science minor for the general elementary, kindergarten-primary, and special secondary credentials, or the life science and general science minor for the general secondary credential.

### Lower Division Courses

**A. Solution and Dosage** (2) I

Arithmetic review with computing of dosage, percentage of solutions, apothecaries weights. Two hours per week.

*** 1. Survey of Biology** (3) I, II

A survey of life science with emphasis on the biology of man in relation to modern life. Three lectures per week. If laboratory credit is wanted by the student, Biology 3 should be taken instead of Biology 1; or Biology 1 may be followed by Biology 4. Not open to students with credit for Biology 3, 4, 10A, 10B, 40, Zoology 1A, 1B, Botany 2A, or 2B.

*** 3. Principles of Biology** (3) I, II

A consideration of basic biological phenomena. Two hours of lecture and three of laboratory each week. Not open to students with credit for Biology 1, 40, 10A, 10B; Botany 1, 2A, 2B; or Zoology 1A, 1B.

*** 4. Plant and Animal Types** (3) I, II

An introduction to the major groups of plants and animals with emphasis on local forms. Two hours of lecture and three of laboratory each week. Not open to students with credit for Biology 10B; Botany 1, 2A, 2B; or Zoology 1A, 1B. Prerequisite: Biology 1 or 3.

# BOTANY

## IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in botany for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Botany 1 or 2A-2B, Chemistry 1A-1B or 2A-2B. Recommended: German, French or Spanish, Zoology 1A-1B, Bacteriology 1, and Geology 1A-1B or 2 and 3. Upper division requirements: A minimum of 24 upper division units, at least 18 units of which must be in botany and six of which may be related courses in bacteriology, chemistry, geology, zoology, selected with the approval of the departmental representative. Nine units in natural science may be applied toward general education requirements. Botany majors are not required to complete a minor.

A *major in arts and sciences* is offered in botany for the B. S. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: in the major, Botany 1 or 2A-2B; in related fields, Chemistry 1A-1B or 2A-2B. Recommended: German, French, or Spanish, Zoology 1A-1B, Bacteriology 1, and Geology 1A-1B or 2 and 3. Upper division requirements: 36 units in botany and approved related fields, to include Botany 102, 107, 114, 150, and 155. Chemistry 101A is strongly recommended. Nine units in natural science may be applied toward general education requirements. A minor is not required.

A *teaching major* is not offered in botany; however, courses in botany are included in the *major in life science and general science* for the general secondary credential and the *major in general science* for the junior high school credential. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in botany. The minor consists of 15 to 22 units in botany, six units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in botany; however, botany may be used as part of the *general science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials or as part of the *minor in life science and general science* for the general secondary credential. For specific information, refer to these credentials.

### Lower Division Courses

**1. Introduction to Botany** (4) I, II

Designed primarily for students who desire a general acquaintance with the fundamentals of botany. Not open to students who have credit for Botany 2A or 2B, but may be used as a prerequisite to upper division courses. Three lectures, and one three-hour laboratory per week.

**2A-2B. General Botany** (4-4) I, II

Year course covering fundamentals of structure, general behavior, morphology and relationship of plants, including an introduction to classification and distribution of seed plants. Two lectures and six hours of laboratory work per week. Botany 2A is a prerequisite for 2B.

**4. California Plants** (2) II

Classification and ecology of representative orders of wild flowers, trees, and chaparral of San Diego region, including practice in the use of keys. One lecture and three hours laboratory per week. Occasional Saturday field trips.

### Upper Division Courses

**102. Mycology** (4) I

A study of the different groups of fungi. Special attention will be given to the parasitic and economic forms, their life history, structure, and classification. Prerequisite: Botany 2B or Botany 1.

**107. Plant Physiology** (4) II

The activities of plants, including food manufacture, absorption, conduction, transpiration, respiration, growth and movement. Two lectures and two laboratory periods per week. Prerequisites: Botany 1 or Botany 2A, and Chemistry 2A-2B or equivalent.

**112. Cultivated Trees and Shrubs** (3) I

Recognition of the common cultivated trees and shrubs of the San Diego region. Trips to local parks and private gardens. One lecture and six hours per week laboratory or field work. Prerequisites: Botany 1, 2A-2B, 4, or equivalent.

**114. Plant Taxonomy** (3) II

Identification, classification and distribution of representative orders of flowering plants. One hour lecture and six hours per week of laboratory and field work. Prerequisites: Botany 1, or 2A-2B, or 4.

**119. Field Botany** (4) Summer

Study of the local native vegetation with emphasis on ecological units within floristic areas. Field trips to be supplemented with laboratory work in herbarium procedure.

**126. Plant Pathology** (3) II

A practical course dealing with the principles of disease in plants, control measures, and quarantine procedures. Emphasis is placed on the determination and control measures of those pathogenic organisms which affect crops, trees and shrubs and nursery stock. Two lectures and one laboratory period per week. Prerequisite: Botany 1 or 2A-2B and 102.

*** 150. Readings in Biology** (2) II

Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles,, ecology, economic zoology, zoogeography, breeding habits and animal behavior. Not open to students with credit for Zoology 150.

**152. Plant Geography** (2) I

Principles of geographic distribution of plants. Two lectures per week. Prerequisite: A college course in botany (Formerly Botany 102).

**153. Economic Biology (2) I**
Study of uses of plants and animals to man and their destructive effects. Consideration also given to general methods of control and conservation. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor. Not open to students who have credit for Zoology 153.

**155. Genetics (3) II**
Principles of plant and animal genetics, with experiments and demonstrations illustrating the mechanisms of heredity. Two hours of lecture and three hours of laboratory per week. Not open to students with credit for Zoology 155. Prerequisites: Biology 3 and 4, Zoology 1A-1B, or Botany 2A-2B.

**158. Conservation of Wildlife (3) II**
A survey of plant and animal resources with emphasis on their conservation and intelligent use. Prerequisite: a college course in biology or consent of the instructor. Not open to students with credit for Zoology 158.

*** 160. Evolution (2) II**
The development of theories of evolution. Two lectures per week. Prerequisite: Biology 1 or equivalent. Not open to students with credit for Zoology 160.

**162. Agricultural Botany (2) I**
A study of California crop plants, their general identification, cultural methods, and regional distribution. Field trips to be arranged. Prerequisite: Botany 1 or Botany 2A-2B.

**166. Honors Course (Credit to be arranged) I, II**
Refer to the Honors Program.

**199. Special Study (1-6) I, II**
Individual study. Six units maximum credit. Prerequisites: 15 units in botany with grades of A or B; and permission of instructor.

### Graduate Courses

**290. Bibliography (1) I, II**
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study (1-6) I, II**
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis or Project (3) I, II**
Guidance in the preparation of a project or thesis for the master's degree.

## BUSINESS CURRICULA

### IN THE DIVISION OF BUSINESS

*Occupational majors* in various fields of *business* are offered for the B.S. degree by the Division of Business, which consists of three departments: Accounting and Business Management; Business Education, Secretarial and Office Management; and Marketing. Each major is in addition to 45 units in general education courses. A minor is not required for the B.S. degree. Students electing to take a minor must select one outside the field of business.

### DEPARTMENT OF ACCOUNTING AND BUSINESS MANAGEMENT

#### Majors

**Accounting:** Lower division: Business 2, 8, 14A-14B, 18A-18B; and Economics 1A-1B (which may be counted toward general education requirements). Upper division: A minimum of 36 upper division units to include Economics 111 or 170 or Business 123; Economics 140; Business 121; and 27 units selected from Business 118A-118B, 133, 160A-160B, 161A-161B, 162, 163, 164A-164B, 165A-165B, 167, and 169.

**Banking and Finance:** Lower division: Business 2, 8, 14A-14B, 18A-18B; and Economics 1A-1B (which may be counted toward general education requirements). Upper division: A minimum of 36 upper division units to include Economics 111 or 170 or Business 123; Economics 140; Business 121; and 27 units selected from Business 105A, 118A-118B, 125, 133, 134, 137, 153, 154, 162, 163; Economics 102, 131, 135, 142, and 190.

**Business Management:** Lower division: Business 2, 8, 14A-14B, 18A-18B; and Economics 1A-1B (which may be counted toward general education requirements). Upper division: A minimum of 36 upper division units to include Economics 111 or 170 or Business 123; Economics 140; Business 121; and 27 units selected from Business 118A-118B, 123, 125, 126, 133, 134, 137, 153, 154, 163, 184; Economics 128, 135, and 150.

**Credit Management:** Lower division: Business 2, 8, 14A-14B, 18A-18B; and Economics 1A-1B (which may be counted toward general education requirements). Upper division: A minimum of 36 upper division units to include Economics 111 or 170 or Business 123; Economics 140; Business 121; and 27 units selected from Business 103A, 123, 133, 134, 137, 162, 163, 186; Economics 105, 131, 135, and 170.

**Insurance:** Lower division: Business 2, 8, 14A-14B, 18A-18B; and Economics 1A-1B (which may be counted toward general education requirements). Upper division: A minimum of 36 upper division units to include Economics 111 or 170 or Business 123; Economics 140; Business 121; and 27 units selected from Business 118A-118B, 125, 126, 127A-127B, 128A-128B or 128C-128D or 128E-128F, 133, 134; Economics 128, 135, and 142.

### Minor

A *minor in arts and sciences* is offered in *business* with specialization in one of the major fields listed above. The minor consists of 15 to 22 units in business courses, six units of which must be in upper division courses selected from one of the major fields listed above. Business 14A-14B must be included in the minor.

## DEPARTMENT OF BUSINESS EDUCATION, SECRETARIAL AND OFFICE MANAGEMENT

### Majors

**General Business:** Lower division: Business 1A-1B, 8, 14A-14B, 18A-18B, plus the requirements in one of the following subfields:

(1) *Accounting:* Nine units selected from Business 2, 21, 24, 25, 27.
(2) *Accounting-Secretarial:* Business 5A-5B, or nine units selected in consultation with the adviser if the student has the equivalent of 5A-5B.
(3) *Merchandising:* Business 24, 25, and 27.
(4) *Secretarial:* Business 5A-5B, or nine units selected in consultation with the adviser if the student has the equivalent of 5A-5B.

Upper division: A minimum of 36 units to include Business 103A, 105A-105B, 108, and 24 units selected from courses in one of the following subfields which corresponds to the lower division preparation:

(1) *Accounting:* Business 121, 160A, 164A, and 15 units selected with the approval of the adviser from the following recommended courses: Business 123, 125, 133, 134, 137, 153, 154, 160B, 161A, 161B, 185; Economics 135, 140, 150, 170.

(2) *Accounting-Secretarial:* Business 121, 160A, 164A, or 113A-113B; and 11-15 units selected with the approval of the adviser from the following recommended courses: Business 123, 125, 134, 153, 154, 160B, 161A, 161B, 164B; Economics 150, 170.

(3) *Merchandising:* Business 121 and seven units selected from Business 185, 186, 187A, 187B, and Art 107; and 14 units selected with the approval of the adviser from the following recommended courses: Business 120, 123, 124, 125, 134, 137, 153, 154, 184; Economics 150, and 170.

(4) *Secretarial:* Business 113A-113B, and 14 units selected from the following recommended courses: Business 120, 121, 123, 125, 134, 153, 154, 164A, 185; Economics 150, and 170.

**Secretarial Management:** Lower division: Business 1A-1B, 5A-5B, 8, 14A-14B, and 18A-18B. Upper division: 39 upper division units consisting of the following courses: Business 103A, 105A-105B, 108, 113A-113B, 125, 134, 153, 164A, 185, and 196.

**Office Management:** Lower division: Business 1A, 2A (or equivalent), 2, 8, 14A-14B, and 18A-18B. Upper division: 42 upper division units consisting of the following courses: Business 103A, 105A-105B, 108, 121, 137, 153, 154, 160A, 161A, 196; Economics 140, 170; and Psychology 121.

### Major for Teaching Credentials

A teaching major in business education is offered for the special secondary and the general secondary credentials. For a statement of requirements, refer to these credentials.

### Minors

A *minor in arts and sciences* is offered in *business* with specialization in one of the major fields listed above. The minor consists of 18 to 22 units to include Business 14A-14B and either Business 1A-1B or Economics 1A-1B; and six or more upper division units selected from courses in one of the major fields listed above.

A *minor in arts and sciences* is offered in *secretarial management*. This minor consists of 23 units. The student must demonstrate competency equal to that required in Business 1A-1B before he can be admitted to the minor program. The minor must include Business 5A-5B, or their equivalent, in the lower division, and 13 units in the upper division to include Business 113A-113B and one of the following: Business 105A, 105B, or 108.

### Minor for Teaching Credentials

A *teaching minor in business education* is offered for the general secondary credential. For a statement of requirements, refer to this credential.

## DEPARTMENT OF MARKETING

### Major

**Marketing:** Lower division: Business 8, 14A-14B, 18A-18B, 24, 25, 27; Economics 1A-1B (which may be counted toward general education requirements); and Business 20 and Art 7 (Business 120 and Art 107 may be substituted if taken in the upper division as part of the major). Upper division: A minimum of 36 upper division units to include Business 121, Economics 140, one of the following courses: Business 123, 153, Economics 111, 170; and 27 units chosen from Business 120, 123, 124, 137, 153, 154, 155, 181, 184, 185, 186, 187A, 187B, 188, 189, 196, 198A, 198B, Home Economics 160A, 160B, Art 107.

An *occupational major in personnel management* is offered by this department. For specific requirements in this major, refer to the section of the catalog on Preprofessional and Occupational Curricula.

### Minor

A *minor in arts and sciences* is offered in *business* with specialization in marketing. The minor consists of 15 to 22 units in business, six units of which must be in courses carrying upper division credit. Students electing business as a minor with specialization in marketing should consult with the adviser in marketing for selection of courses.

## BUSINESS COURSES

### Lower Division Courses

**A. Business Mathematics** (1) I, II

A practical course in the mathematics of business. A thorough study of interest, compound interest, discount, insurance rates, etc.

**1A-1B. Typewriting** (3-3) Year, I, II

Development of a command of a keyboard, acquisition of speed and the artistic arrangement of typewritten material with special reference to commercial forms, tabulation and billing. (1A is a prerequisite for 1B.) Business 1A is not open to students with credit for Business 2A.

**. Mathematics of Finance** (3) I, II
Interest and annuities; amortization; sinking funds; valuation of bonds; depre-
iation; mathematics of building and loan associations. Prerequisites: Two years of
lgebra in high school, or equivalents.

**A. Personal-Use Typewriting** (3) I, II
A short course designed for those not wishing to enter the business office but
esiring a knowledge of or skills in the use of the typewriter. Five hours laboratory
ractice. Not open to students with credit for Business 1A.

**A. Office Machines: Rotary Calculator** (1) I, II
A six-weeks course designed to teach students the operation of the rotary calcu-
ator. Operations basic to statistics, accounting, and other areas needing this skill will
e stressed. Not open to students with credit for Business 105A.

**B. Office Machines: Key-Driven Calculator** (1) I, II
Same as 3A, except the key-driven calculator is substituted for the rotary calcu-
ator. Not open to students with credit for Business 105A.

**C. Office Machines: Printing Calculator** (1) I, II
Same as 3A, except the printing calculator is substituted for the rotary calculator.
ot open to students with credit for Business 105A.

**. Introductory Typewriting** (1) I, II
A short, introductory course building the fundamentals of typing in a six-weeks
eriod. Students enroll for the first six weeks, the second six weeks, or the third six
eeks in a semester. Not open to Business Education or Secretarial majors.

**A-5B. Shorthand** (5-5) Year, I
An intensive course designed for the practical preparation of office secretaries.
thorough study of the Gregg System. Development of the ability to read and write
horthand rapidly and correctly, both literary and commercial. The shorthand speed
ecessary to pass a civil service examination is attained by the end of the year. (5A is
prerequisite for 5B.)

**A-6B. Advanced Shorthand** (3-3) Year, I or II
Development of speed in writing and transcription. Advanced dictation on letter
orms, legal forms, speeches, and literary and technical material. Prerequisite: Busi-
ess 5A-5B or equivalent. (6A is a prerequisite for 6B.)

**. Business Communication** (3) I, II
A course designed to give training in writing as a means of solving modern
usiness problems. Prerequisites: English 1 and Business 2A or its equivalent.

**14A-14B. Principles of Accounting** (3-3) I, II
The balance sheet; profit and loss statement; the opening, conducting, and closing
f books for different kinds of businesses; organizations, reorganizations, dissolutions,
nd consolidations, etc., keeping in view the best modern accounting practice. Five
ours lecture and laboratory. (14A is a prerequisite for 14B.)

**18A-18B. Business Law** (3-3) I, II
The fundamental principles of business law. Cases showing the actual applica-
ion of the principles to business transactions. The subjects covered: Contracts, sales,
gency, negotiable instruments, insurance, and wills. Either semester may be taken first.

**20. Consumer Income Management** (3) I, II
Consumer incomes; bases of consumer choice-making; practical problems of
uying food, clothing, shelter, transportation, insurance, etc.; family budgeting; market
structure and functions seen from the consumer's point of view. Not open to students
with credit for Business 120. A general education course in family life education.

**21. Organization and Management of Small Business** (3) I
Problems confronting the small business man with regard to finance, organization,
management. Reasons for failures and success in small business. Specific study of
various kinds of small businesses.

**24. Retailing (3) I, II**

Study of retail stores, emphasizing the problems of store managers and merchandising executives; store location, organization, personnel, sales promotion, buying and handling of merchandise, inventory, turnover, and control methods. Problems of profitable operation under changing conditions.

**25. Salesmanship (3) I, II**

Theoretical and psychological backgrounds of salesmanship, newer concepts of selling; the selling of ideas and services; steps in a sale: Attention, interest, desire, closing; the development of clienteles and of good will; the personal factor in salesmanship.

**26. Applied Salesmanship (2) II**

Practice in selling; supervised work in cooperating stores, or outside selling; relationships between theory and practice. Prerequisite: Business 25 and permission of instructor.

**27. Advertising Principles (3) I, II**

Advertising as a sales promotional tool in marketing activities; consumer, market and product analysis; advertising media; preparation of advertisements; measurement of advertising effectiveness; economic and legal aspects of advertising; public relations; advertising campaigns.

**65A-65B. Record Keeping. (1-3 each semester) Year, II**

Application of accounting practice and principles to accounting practice; the technical arrangement of accounting forms, records and reports found in business. Prerequisite: Business 14A. Business 65A is a prerequisite for 65B.

## Upper Division Courses

**103A. Office Management (3) I, II**

A study of the functions of the office, duties of the office manager, organization of the office, communication functions, physical facilities involved, personnel relationships of management and worker, and the controls necessary for efficient output.

**105A. Office Systems (3) I, II**

A course designed to develop fundamental skills in the instructional figuring and bookkeeping machines used in offices, together with their interrelating functions as these affect office systems. Not open to students with credit for Business 3A or 3B or 3C.

**105B. Office Systems (3) I, II**

The relationship of voice-writing, addressing, and duplicating machines to office procedures and routines is studied and skills developed in these areas of use.

**105C. Office Systems: Accounting Machines (1) I, II**

An introduction to the use of machines in accounting systems, their operation, potentialities, and limitations. Designed primarily to acquaint accounting majors with the operational aspects of accounting machines.

**108. Records Management (3) I, II**

Intensive survey of the various means of preparing, keeping, storing, and disposing of office records to facilitate the efficient management of business. Various systems of records management will be studied together with the equipment and supplies required.

**113A-113B. Secretarial Office Practice (5-5) Year, I**

Practice in the duties and routines of office work as required of the stenographer and secretary with special emphasis on the shorthand dictation and transcription problems arising in various types of offices. Prerequisite: Business 1A-1B, 5A-5B, or their equivalent.

**118A-118B. Advanced Business Law (3-3) Year, I, II**

An advanced study of the law of personal and real property, partnership, corporation and the laws regulating trade and trade practices and competition. Elective for business majors.

**120. Consumer Income Management** (3) I, II

Functions and responsibilities of consumers; problems of choice-making; planning expenditures for housing, household operation, insurance and investments. Economics of installment buying, borrowing procedures, control of frauds, legislation affecting consumers. Not open to students with credit for Business 20.

**121. Business Management** (3) I, II

Problems of business management as an interrelated whole. A discussion of the problems of the business manager with particular reference to the character of the problems involved and to the control policies and devices of the manager. Prerequisite: Economics 1A-1B and senior standing or consent of instructor.

**123. Marketing Principles** (3) I, II

Study of marketing functions; activities of producers, wholesalers, retailers and other middlemen; channels of distribution; integration of marketing activities; price policies; government regulation. Prerequisite: Economics 1A-1B.

**124. Marketing Administration** (3) II

An advanced course dealing with practical aspects of marketing. Solutions of problems faced by producers, wholesalers, retailers and other middlemen in the marketing of their products. Prerequisite: Business 123.

**125. General Insurance** (3) I

Economic theory of risk; transfer of risk; distribution and prevention of loss; types of insurance carriers; problems of rate making; the insurance contract; coverages; special forms of life, fire, marine and casualty insurance; state supervision.

**126. Casualty Insurance** (3) II

The nature and reasons for existing practices in compensation and casualty insurance. The social and legal bases of insurance, fundamental principles of rate making, policy provisions, state regulation and state insurance. Prerequisite: Business 125.

**127A. Life Insurance—Principles and Practice** (3) I

Types of life insurance companies and associations, home office and agency organization, types of contracts, surrender value, policy loans and extended insurance, surplus and dividend policies, reserves, group, industrial and social insurance, and state supervision.

**127B. Life Insurance Salesmanship** (3) II

Special problems of life insurance selling, with emphasis on the psychological aspects of insurance selling, on specific techniques for finding prospects, for managing the sales interview. For students interested in life insurance selling, and those planning to obtain life underwriter's certification.

**128A-128B. Advanced Life Insurance** (3-3) Year, I

An advanced course in life insurance. The emphasis is on preparation for the C. L. U. Certificate. 128A is a prerequisite for 128B.

**128C-128D. Advanced Life Insurance** (3-3) I

Prepares the student for Part D of the Chartered Life Underwriters examination showing how life insurance strengthens banking credit, financial structure of corporations, and partnerships; also, life insurance as an investment. Business 128C is a prerequisite for Business 128D.

**128E-128F. Advanced Life Insurance** (3-3) Year, I

Prepares for part of the Chartered Life Underwriters examination. Covers the four sections, "Life Insurance Fundamentals," "General Education," "Law, Trust and Taxes," and "Finance"; teaches proficiency in the analysis of cases or problems. Business 128E is a prerequisite for Business 128F.

**133. Corporation Finance** (3) I

The corporate form of organization, instruments of long-time finance, methods of raising capital, efficient financial management, the financing of reorganizations, and governmental control. Not open to students who have credit for Economics 133.

**134. Investments** (3) I, II

Investment principles and practices with emphasis upon problems of the sma investor, such as tests of a good investment, sources of information, types of stocks an bonds, mechanics of purchase and sale, investment trusts, real estate mortgages, an the like.

**137. Credits and Collections** (3) I, II

The credit man and his work, including the instruments with which he work sources of credit information, the technique of his department, collection method legislation for the protection of debtor and creditor, and credit insurance.

**153. Personnel Management** (4) I, II

Problems in the management of personnel relations, including techniques o selecting, training, supervising and rating employees. Methods used by managemen in job evaluation; wage and salary payment plans; employee services; health an safety; union relationships; stimulation of interest.

**154. Wage and Salary Administration** (3) I

Problems of job analysis; major techniques of job evaluation, including ranking classification, point system, factor comparison; problems of wage and salary administration, incentive pay methods; merit rating plans. Not open to students with credi for Political Science 146.

**155. Supervisory Staff and Employee Training** (3) II

Training as a management function and as an aspect of communication; operating methods and structure of training departments; types of training; use of community facilities; evaluation of training results. Projects designed to meet specia student needs. Not open to students with credit for Political Science 181.

**160A-160B. Advanced Accounting** (3-3) Year, I

An intensive study of the corporation, its accounting and financial problems; a thorough study of the balance sheet; depreciation; factory accounting, etc. Prerequisite: Business 14A-14B. (160A is a prerequisite for 160B.) Required of accounting majors.

**161A-161B. Cost Accounting** (3-3) Year, I

Principles and methods of cost accounting in the mercantile establishment and in the factory. A study of industrial accounting procedure, the forms used, and their application to practical problems. Prerequisites: 14A-14B; 161A is a prerequisite for 161B.

**162. Accounting Systems** (3) II

The accounting systems used in various types of business and financial concerns. Some practice in devising and installing systems. Prerequisite: Business 14A, 14B, 105C. Business 105C may be taken concurrently.

**163. Financial Statements** (3) II

The construction, composition, analysis and interpretation of accounting reports with particular emphasis on the form, content and phraseology of reports. Prerequisite: Business 160A-160B.

**164A-164B. Income Tax Procedure** (3-3) Year, I

A study of the laws and a consideration of the problems arising from state and federal income, inheritance and corporation tax. 164A is a prerequisite for 164B. Senior standing or consent of instructor is required.

**165A-165B. Auditing** (3-3) Year, I

The fundamental principles of accepted procedures of auditing and related types of accounting engagements. 165A is a prerequisite for 165B. Prerequisite: Business 160A-160B.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**167. Governmental Accounting** (3) I

A comparative study of accounting systems used by municipalities, counties, and the State of California; detailed comparisons with commercial practice; procedures in handling budget accounts, appropriations, and encumbrances; subsidiary records; cost records; internal checks; auditing. Prerequisite: 160A-160B or consent of the instructor.

**169. C. P. A. Review (3) II**
An intensive review of the accounting principles and procedures covered in the ccounting theory and accounting practice sections of the uniform C. P. A. examinaion prepared by the American Institute of Accountants. Prerequisite: Business 60A-160B, 161A-161B, 164A-164B, 165A-165B, 167.

**80. Public Relations (3) I**
Principles, methods, and objectives in the field of public relations; evaluation of he "publics" of institutions and industry; case studies of public relations problems. 'rerequisites: Journalism 51A-51B, or permission of the instructor. Not open to stuents with credit for Journalism 180.

**81. Radio Sales and Advertising (3) I, II**
A study of advertising trends in radio advertising; time buying, audience survey, nd program types in relation to products to be advertised via radio broadcasting. ncludes publicity and promotion of radio programming organization of a radio station; elationship between the business and entertainment factors of radio broadcasting. 'rerequisite: Consent of the instructor. Not open for credit to students with credit n Speech Arts 181.

**84. Sales Management (3) I**
Consideration of problems confronting the modern sales executive; selection, raining, compensation and control of the sales force; sales analysis; sales quotas; ales costs and budgets; market and product research and analysis; coordination of ersonal selling with other form of sales effort.

**85. Advertising Copy and Layout (2) II**
Introduction to principles and techniques of copy writing; types of copy; reparation of layouts; mechanical methods employed by the artist, engraver and rinter; legislation and regulations affecting advertising claims. Prerequisite: Business 27, or permission of instructor. Not open to students with credit for Journalm 185.

**86. Store Management (2) I**
Retail locations, buildings, layouts and fixtures; store supplies and maintenance; eceiving, marking, storing, wrapping and delivering merchandise; customer service, djustments, credit and collections; expense control. Prerequisite: Business 24, or ermission of instructor.

**87. Buying and Merchandising Methods (3) II**
Buying for retail stores; customer demand; merchandise resources; trading chniques; terms and discounts; dollar and unit controls; pricing, turnover, and inntory control; merchandising budgets. Prerequisites: Business 24 or permission of structor. (Formerly 187A-187B. Not open to students with credit in either of these urses.)

**88. Advertising Media (2) I**
A thorough coverage of advertising media. Market characteristics; rates and urces of information; evaluation of media; problems of coverage, duplication, costs d scheduling; advertising salesmanship. Prerequisite: Business 27, or permission instructor.

**89. Advertising Problems (3) I**
Principles of advertising applied to the solution of actual advertising problems countered by business firms. Estimating opportunities for effective use; promotional mpaigns; selection of media, retail advertising, national advertising, advertising encies; advertising services of publishers. Prerequisite: Business 27, or permission instructor.

**0. Objectives and Curricula in Business Education (3) II**
A study of the objectives of business education and a detailed analysis of the ctors involved in the construction of a business curriculum.

**6. Work Experience (2) I, II**
Supervised work in cooperating stores or offices; relationship between theory d practice in specific business conditions. Prerequisite: Permission of instructor.

**198A-198B. Investigation and Report** (1 to 3 each semester) I, II
A comprehensive and an original study of a problem connected with busine under the direction of one or more members of the business staff. Prerequisite: Senio standing and permission of the instructor. 198A is a prerequisite for 198B.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission instructor.

### Graduate Courses

**200. Readings in Current Literature in Business Education** (2) I
Specialized reading in one or more phases of business education, followed by discussion and written report of the value of each article read.

**203. Office Management** (2)
An intensive study of the problems of office management and their solution. Th relation of records, reports, budgets and manuals to managerial control. Prerequisites Business 14A-14B, 103A.

**213. Problems in Business Education** (2) II
Designed to fit the needs of individual students and their problems through th writing of research papers, of a term or individual study nature. The studies to be mad will cover the principles of good teaching, trends in Business Education, curren literature.

**221. Basic Business Education** (2)
An introduction to the content and methodology of teaching basic Business Edu cation.

**223. Problems of Distributive Business** (2)
Critical analysis of distributive business problems in the light of changing ec nomic, social and governmental conditions. Prerequisite: Business 121, 123.

**233. Administration and Supervision of Business Education** (2) I
Designed to provide students who hold, or who expect to hold, administrative pos tions in Business Education with the techniques necessary for successful executive worl

**260. Advanced Problem Analysis** (Accounting) (2)
The study of conditions causing various accounting problems with special empha sis upon the theory and practices involved in their solution. Prerequisite: Busines 160A-160B, 161, 165.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliogra phies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff to be arranged with department chairman and instructor.

**299. Thesis or Problem** (3)
Guidance in the preparation of a project or thesis for the master's degree. Stu dents have an option of a comprehensive examination or a thesis or project, wit approval of the graduate office.

## CHEMISTRY

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in chemistry for the A.B. and for the B.S degrees. Courses in the major are in addition to 45 units in general education courses These curricula are outlined below.

A *teaching major in physical science and general science* is offered for the genera secondary school credential and a *teaching major in general science* is offered for th general junior high school credential. For statement of requirements, refer to thes credentials.

### Minor

A *minor in arts and sciences* is offered in chemistry. The minor consists of 15 to units, six units of which must be in courses carrying upper division credit. Chem- try 1A-1B, or its equivalent, must be included in the minor.

A *teaching minor in physical science and general science* is offered for the general condary, special secondary, general elementary, and kindergarten-primary creden- als. For statement of requirements, refer to these credentials.

### Curricula for Chemistry Majors in Arts and Sciences

The curriculum outlined below for the B.S. degree is based upon the recom- endations of the Committee for Professional Training of Chemists of the American emical Society. It qualifies graduates for many types of positions as chemists and ovides the training required by most universities for admission to graduate work in emistry. This department is on the approved list of the American Chemical Society. udents may also arrange a program which leads to the A.B. degree and meet the commendations of the American Chemical Society and the requirements of most iversities for admission to graduate work in chemistry.

The final curriculum outlined below for the A.B. degree is designed for students ho do not intend to become professional chemists, but who desire the major in chem- ry as part of a general education or in preparation for training in a related profes- on. By proper choice of electives, graduates can meet the requirements for admission medical schools. The sequence of courses listed below represents the minimum chnical requirement for an A.B. degree with a major in chemistry. A minor is quired of chemistry majors taking the A. B. degree. A minor is not required for the S. degree.

### Plan for B.S. Degree and Certificate of the American Chemical Society

| | *Units* | |
|---|---|---|
| *rst year* | *1st Sem.* | *2d Sem.* |
| Chemistry 1A-1B | 5 | 5 |
| Physics 4A | – | 4 |
| Mathematics 3A-3B | 3 | 3 |
| Health Education 21 | 2 | – |
| Psychology 1 | – | 3 |
| Biology 1 or 3 | 3 | – |
| English 1 | 3 | – |
| P. E. activity | ½ | ½ |
| | 16½ | 15½ |

| | *Units* | |
|---|---|---|
| *Second year* | *1st Sem.* | *2d Sem.* |
| Chemistry 5A-5B | 4 | 4 |
| Physics 4B-4C | 4 | 4 |
| Mathematics 4A-4B | 3 | 3 |
| †* German 1, 2 | 3 | 3 |
| * Speech Arts 3 | 2 | – |
| * Social Science | – | 3 |
| * P. E. activity | ½ | ½ |
| | 16½ | 17½ |

| *ird year* | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Chemistry 101A-101B | 4 | 4 |
| Chemistry 102A-102B | 1 | 1 |
| Chemistry 110A-110B | 3 | 3 |
| German 8A-8B | 3 | 3 |
| Social Science | 3 | 3 |
| Lit., Phil., and Arts | 3 | – |
| | 17 | 14 |

| *Fourth year* | *1st Sem.* | *2d Sem.* |
|---|---|---|
| Chemistry 111 | – | 3 |
| ‡ Advanced Chemistry | 9 | 8 |
| * Lit., Phil., and Arts | 3 | – |
| Electives | 4 | 4 |
| | 16 | 15 |

* General education courses (nine units of chemistry, physics, and mathematics y be applied toward general education requirements.)

† The B.S. degree may be obtained without the Certificate of the American Chemi- Society by substituting for the German courses, six units of general education rses and six units of electives.

‡ Must include four units lecture and one unit laboratory in chemistry courses re- ring three full year-courses in chemistry as prerequisites. Remainder may include rses in related subjects by approval of department.

## Plan for A.B. Degree and Certificate of the American Chemical Society

| First year | Units<br>1st Sem. | 2d Sem. |
|---|---|---|
| Chemistry 1A-1B | 5 | 5 |
| Physics 4A | – | 4 |
| Mathematics 3A-3B | 3 | 3 |
| * Health Education 21 | 2 | – |
| * Psychology 1 | – | 3 |
| * Biology 1 or 3 | 3 | – |
| * English 1 | 3 | – |
| * P. E. activity | ½ | ½ |
|  | 16½ | 15½ |

| Second year | Units<br>1st Sem. | 2d Sem |
|---|---|---|
| Chemistry 5A-5B | 4 | 4 |
| Physics 4B-4C | 4 | 4 |
| Mathematics 4A-4B | 3 | 3 |
| †* German 1, 2 | 3 | 3 |
| * Speech Arts 3 | 2 | – |
| * Social Science | – | 3 |
| * P. E. activity | ½ |  |
|  | 16½ | 17 |

| Third year | 1st Sem. | 2d Sem. |
|---|---|---|
| Chemistry 101A-101B | 4 | 4 |
| Chemistry 102A-102B | 1 | 1 |
| Chemistry 110A-110B | 3 | 3 |
| † German 8A-8B | 3 | 3 |
| * Social Science | 3 | 3 |
| * Lit., Phil., and Arts | 3 | – |
|  | 17 | 14 |

| Fourth year | 1st Sem. | 2d Sem |
|---|---|---|
| Chemistry 111 | – | 3 |
| ‡ Chemistry electives | 2 | 3 |
| Minor (U. D.) | 6 | 3 |
| * Lit., Phil., and Arts | 3 | 4 |
| Electives | 3 | – |
|  | 14 | 13 |

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* General education courses (nine units of chemistry, physics, and mathematic may be applied toward general education requirements.)

† The A.B. degree may be obtained without the Certificate of the American Chemical Society by substituting for the German courses, six units of general education course and six units of electives.

‡ Must include four units lecture and one unit laboratory from courses requirin three full year-courses in chemistry as prerequisites.

## Plan for A.B. Degree for Related Professions

| First year | Units<br>1st Sem. | 2d Sem. |
|---|---|---|
| Chemistry 1A-1B | 5 | 5 |
| * Physics 2A-2B | 3 | 3 |
| * Physics 3A-3B | 1 | 1 |
| * Mathematics 7A-7B | 3 | 3 |
| * English 1 | 3 | – |
| * Psychology 1 | – | 3 |
| * P. E. activity | ½ | ½ |
|  | 15½ | 15½ |

| Second year | Units<br>1st Sem. | 2d Sem |
|---|---|---|
| Chemistry 5A-5B | 4 | 4 |
| †* French or German | 3 | 3 |
| * Speech Arts 3 | 2 | – |
| * Health Education 21 | – | 2 |
| * Biology 1 or 3 | 3 | – |
| * Lit., Phil., and Arts | – | 3 |
| Elective | 3 | 3 |
| * P. E. activity | ½ |  |
|  | 15½ | 15 |

| Third year | 1st Sem. | 2d Sem. |
|---|---|---|
| Chemistry 101A-101B | 4 | 4 |
| Chemistry 102A-102B | 1 | 1 |
| Chemistry 110A-110B | 3 | 3 |
| * Social Science | 3 | 3 |
| * Lit., Phil., and Arts | 3 | – |
| * Elective | 3 | – |
| Minor | – | 3 |
|  | 17 | 14 |

| Fourth year | 1st Sem. | 2d Sen |
|---|---|---|
| Chemistry 111 | – | 3 |
| Chemistry electives | 3 | 2 |
| * Social Science | 3 | – |
| Minor | 3 | 3 |
| Electives | 7 | 7 |
|  | 16 | 15 |

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* General education courses.

† Six units of general education courses may be substituted for the French c German.

### Lower Division Courses

**1A-1B. General Chemistry** (5-5) Year, I, II

General principles of chemistry with emphasis on inorganic materials. Three lectures and six hours of laboratory per week. Qualitative analysis is included in the second semester. Prerequisites: Elementary algebra and plane geometry. Recommended: High school chemistry, physics, and additional mathematics.

***2A-2B. Fundamentals of Chemistry** (3-3) Year, I

A general course including inorganic, organic, and biological chemistry for students not intending to take further work in chemistry. Emphasis is placed on applications of chemistry to everyday life. Two lectures and one laboratory period per week. Not open to students with credit for Chemistry 1A-1B.

**5A. Elementary Quantitative Analysis** (4) I

Theoretical consideration of the principles of gravimetric and volumetric analysis. Practice in standardizing reagents and analyzing samples. Two lectures, and two laboratory periods per week. Prerequisite: Chemistry 1A-1B, and facility in the use of logarithms and slide rule.

**5B. Quantitative Analysis** (4) II

Further work in the theory and practice of volumetric and gravimetric analyses and the study of electro analytical methods. Two lectures and two laboratory periods per week. Prerequisite: Chemistry 5A.

### Upper Division Courses

**101A-101B. Organic Chemistry** (4-4) Year, I

The first semester lecture stresses aliphatic compounds and includes an introduction to aromatic compounds. The second semester stresses the aromatics, continues with more complex aliphatics and introduces mechanisms of organic reactions. Three lectures and three hours of laboratory per week. Prerequisite: Chemistry 1A-1B. (Chemistry 101A-101B and 102A-102B replace the former courses in Chemistry 101, 102, and 103.)

**102A-102B. Organic Chemistry Laboratory** (1-1) Year, I

Synthesis of typical aliphatic and aromatic compounds. Study of the theory and practice of laboratory operations. Three hours of laboratory per week. Must be taken concurrently with 101A-101B.

**105. Advanced Quantitative Analysis** (4) II

Advanced work in the theory and practice of volumetric, gravimetric, and electroanalysis. Prerequisite: Chemistry 5A. Not open to students with credit for Chemistry 5B.

**110A-110B. Physical Chemistry** (3-3) Year, I

Theoretical principles of chemistry with emphasis on mathematical relations. Three lectures per week, problems and reports. Prerequisites: Physics 2A-2B, or equivalent; Math. 4B, or equivalent; Chemistry 5A-5B.

**111. Physical Chemistry Laboratory** (3) II

Physico-chemical apparatus and measurements, with emphasis on technical report writing. Discussion period and three laboratory periods per week. Prerequisite: Chemistry 110B, or concurrent registration with permission of the instructor.

**114A. General Biochemistry** (4) I

The chemistry and metabolism of carbohydrates, fats, and proteins. Three lectures and one laboratory period per week. Prerequisites: Chemistry 5A, 101A-101B or permission of the instructor. Recommended: Biology or zoology.

**114B. Clinical Chemistry** (4) II

Lectures and laboratory work on the chemical composition of blood, urine, and body tissues. One lecture per week and three laboratory periods per week. *Open primarily* to students enrolled in the Laboratory Technician Curriculum. Prerequisite: Chemistry 114A.

**118. Colloid Chemistry** (2) II (Offered alternate years)
The theoretical principles of colloid chemistry and the preparation, propert
and practical applications of colloids. Two lectures per week. Prerequisite: Chemis
101A, 110A and 110B.

**122. Glass Blowing** (1) II
Elementary training in the manipulation of glass. Prerequisite: Chemist
1A-1B. One laboratory period per week.

**127. Advanced Inorganic Chemistry** (3) II (Offered alternate years)
A lecture course dealing with such topics as the physical basis of the perio
system, complex inorganic compounds, and the nature of the chemical bond. Thr
lectures per week. Prerequisite: Three years of chemistry.

**144A-144B. Principles of Chemical Engineering** (3-3) Year, I
(Offered alternate yea
Industrial stoichiometry, flow of fluids, heat transfer, unit processes and ty
of industrial equipment. Three lectures per week, problems and reports. Prerequisit
Credit or registration in Chemistry 110A-110B.

**154. Organic Qualitative Analysis** (3) II
A systematic study of the identification of organic compounds and mixtur
One lecture and two laboratory periods per week. Prerequisite: Chemistry 5B or 1
101B.

**155. Instrumental Methods of Analysis** (3) I
Theory and practice of modern methods of instrumental analysis, including u
of pH meters, colorimeters, spectro-photometers, and other analytical devices. Disc
sions, reports, field trips, special individual projects. One lecture and two laborato
periods per week. Prerequisite: Three year-courses in chemistry.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisites: open only to s
dents who have shown ability to do A or B work in chemistry; permission of instruct

## Graduate Courses

**200. Seminar** (2-2) I, II
An intensive study of some phase of advanced chemistry.

A. Advanced Organic Chemistry
B. Chemical Kinetics
C. Chemical Thermodynamics
D. Molecular Structure
E. Electrochemistry
F. Advanced Biochemistry
G. Spectrographic Analysis
H. Photochemistry
I. History of Chemistry

**290. Bibliography** (1) I, II
Exercise in the use of basic reference books, journals, and specialized bib-
ographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of sta
to be arranged with department chairman and instructor.

**299. Thesis** (3) I, II
Guidance in the preparation of a project or thesis for the master's degree.

# COMPARATIVE LITERATURE

## IN THE DIVISION OF LANGUAGES AND LITERATURE

All reading assigned for classes in Comparative Literature is in English transations, and no knowledge of any foreign language is required.

Major work is not offered in comparative literature; however, courses in this field nay be used as part of the English major in arts and sciences. For specific information, efer to English.

Courses in comparative literature may be used as part of the teaching major in nglish for the general secondary and general junior high school credentials with the pproval of the departmental representative. For specific information, refer to the utlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in comparative literature. The minor conists of 15 to 22 units in comparative literature, nine units of which must be in courses arrying upper division credit.

A *teaching minor* is not offered in comparative literature; however, courses in his field may be used as part of the teaching minor in English for the general secndary, the special secondary, the general elementary, and the kindergarten-primary redentials. For specific information, refer to the outlines of requirements for these redentials.

### Lower Division Courses

**52A-52B. Masterpieces of World Literature** (3-3) Year, I

A chronological survey from Homer to modern times. The first semester stresses he classical epic and tragedy. The second semester, beginning with the Renaissance, tresses prose fiction, the drama, and the essay. Not open to students with credit for nglish 52A-52B.

### Upper Division Courses

**101A. Modern Continental Fiction** (3) II

A survey of leading French, Russian, Scandinavian, Italian, and German novelsts and short story writers, from Tolstoy and his associates to the present day. Not pen to students with credit for English 101A.

**104A-104B. Spanish-American Literature** (3-3) I

For a description of this course, see Spanish 104A-104B, which may be taken for redit in Comparative Literature by doing the required reading in English translation.

**115. The Bible as Literature** (3) I

A study of the narrative, poetry, and prophecy of the King James version of the ible. Readings, reports, lectures, and discussions. Not open to students with credit for nglish 115.

**138. Introduction to Aesthetic Appreciation** (1) I

Major forms of expression and aesthetic experience in art, music and literature, resented by an interdepartmental staff through lectures, demonstration, and panel iscussions. Not open to students with credit for Aesthetics 138.

**140A-140B. Masterpieces of French Literature** (3-3) Year, I

A cultural course designed to be given in introduction to the great French works om the Song of Roland through Cyrano de Bergerac, with emphasis on the 16th, 17th, th and 19th century authors. The contributions to world thinking of Rabelais, Monigne, Moliere, Racine, Descartes, Pascal, Montesquieu, Voltaire, Rousseau, Hugo, alzac, Flaubert, Maupassant, Zola, will be studied through lectures and outside adings.

**142. The Golden Age of German Literature** (3) II

Masterpieces of German literature from the 18th and early 19th centuries. Not en to students with credit for German 142.

**152A-152B. Survey of Drama** (3) Year, I

Study of selected tragedies and comedies from Asiatic, European, English, and merican literature, with emphasis upon the human problems depicted therein and on the timelessness of certain themes, such as those of Electra and Medea. Lectures, scussions, and reports on readings. Not open to students with credit for English 2A-152B.

**159. The Rise of Romanticism in European Literature** (3) II
Continental origins and growth of the romantic movement. Studies in the worl of Rousseau, Goethe, Schiller, Lessing, Chateaubriand, Mme. de Stael, and others.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission instructor.

# ECONOMICS

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *economics* for the A.B. degree. Cours in the major are in addition to 45 units in general education courses. Lower divisio requirements: Economics 1A-1B; Business 14A-14B. Upper division requirements 24 units in economics to include Economics 100A, 100B and 140. Six of the 24 uni may be in related fields, selected with the approval of the departmental adviser. minor is required.

A *teaching major in social sciences* is offered for the general secondary and ge eral junior high school credentials. For a description of these majors, refer to th credentials.

### Minor

A *minor in arts and sciences* is offered in *economics*. The minor consists of 15 t 22 units in economics, nine units of which must be in courses carrying upper divisio credit.

A *teaching minor in economics* is offered for the general secondary school crede tial or as part of the *social science minor* for the special secondary, general elementar and kindergarten-primary credentials. For a statement of requirements, refer to thes credentials.

### Lower Division Courses

*** 1A-1B. Principles of Economics** (3-3) Year, I, II
The basic principles of economics: Business organization and production; mone credit and banking, depression problems; prices, competition, and monopoly; incom distribution; public finance; international trade; economic systems. Aims of course Foundation for further study, business pursuits, and intelligent economic citizenshi Prerequisite: 1A prerequisite for 1B.

### Upper Division Courses

**100A. Intermediate Economic Theory** (3) I
Economic theory with special reference to the theory of the firm and the indu try; value and distribution. Prerequisite: Economics 1A-1B.

**100B. Intermediate Economic Theory** (3) II
Economic theory with special reference to national income analysis and th theory of investment. Prerequisite: Economics 1A-1B.

*** 102. Comparative Economic Systems** (3) II
The economic aspects of laissez-faire and regulated capitalism, cooperative socialism, communism, nazism, fascism. Experience in Russia, Germany, Unite States, Great Britain. Criteria for evaluating economic systems. The individual an government in each system. Planning in a liberal capitalistic society.

**105. Economics of Consumption** (3) I (Not offered in 1952-53)
An analysis of the determination of consumer demands, the relationship of th consumer to the price system, the effects of consumption and saving upon income an employment, the effects of monopoly and advertising upon consumers' welfare.

**110. Economic History of Europe** (3) I
A general survey of economic development from the Middle Ages to the present Particular attention is given to the impact of the Industrial Revolution on nationa economics, especially on England's commerce and industry.

***111. Economic History of the United States** (3) II

A comprehensive survey of American economic development and of national legislation in the field of industry and commerce.

***115. Current Economic Problems** (3) (Summer)

Discussion of present-day economic problems of both domestic and international character.

**127. Agricultural Economics** (3) II

Major problems of finance, markets, conservation, overproduction, economic institutions and governmental policy, in relation to agriculture. Emphasis on regional problems.

**128. Urban Land Economics** (3) I

Real estate in its various aspects: Property rights, transfer of title, valuation, finance, selling, property management, taxation, insurance, city planning, etc., with special emphasis upon problems as they exist in San Diego.

***131. Public Finance** (3) II

Principles and practices of taxation and public expenditures. Economic effects of public spending, debts and taxation. Financing social security and other services. Fiscal policy and prosperity. Relation to inflation and deflation. Special emphasis on social problems involved.

**133. Corporation Finance** (3) I

The corporate form of organization; instruments of long-time finance; methods of raising capital, efficient financial management, financing of reorganizations, and government control. Not open to students with credit for Business 133.

**135. Money and Banking** (3) II

The elements of monetary theory. History and principles of banking with special reference to the banking system of the United States.

**140. Statistical Methods** (3) I, II

Statistical method in the social sciences. Tabular and graphical presentation. Frequency and time series analysis. Index numbers and correlation techniques. Prerequisite: Mathematics A-B, and C, or equivalent. Not open to students with credit for Sociology 103, Psychology 104A, 104B.

**142. Business Cycles** (3) I

Fundamental factors in business cycles are analyzed and cycle theories are examined. Study of current business conditions begins early in the course and develops into practical application of forecasting methods to both business and other data. Prerequisite: Economics 1A-1B.

**150. Labor Problems** (3) I

A study of labor organizations and their policies, wages, strikes, unemployment, social insurance, child labor, labor legislation, plans for industrial peace, and other labor problems.

**151. Labor Legislation and Public Policy** (3) II

Economic aspects of labor problems in terms of governmental action (legislative, administrative and judicial).

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

***170. Government and Business** (3) I, II

General survey of governmental activities affecting business; the state as an entrepreneur and manager; governmental assistance to business; governmental regulation of business in its historical, legal and economic aspects, including recent developments in the United States and abroad; proposed policies.

**171. Transportation** (3) I (Not offered in 1952-53)

The development of railway transportation; railroad financing; rates and rate making; governmental regulation; government operation of railroads during the war; recent development of motor and air transportation. Prerequisite: Economics 1A-1B.

**172. Public Utilities (3) II**

The growth of public utilities in the United States; economics of public utilit rates; valuation; public regulation and its legal basis; public ownership; transport tion problems. Prerequisite: Economics 1A-1B.

**185. Social Insurance (3) I**

Old age pensions, health insurance, unemployment insurance, and Soci Security Act. Strength and weakness of existing systems.

**190. International Economics—Principles (3) I**

National welfare and foreign trade. Principle of comparative costs, comparativ advantages in various nations. Foreign exchange and the balance of payments, financin foreign trade. Regulations over trade and obstructing factors. Techniques of exportin and importing. Doctrines of international trade.

**195. International Economics—Problems (3) II**

Important aspects of international cooperation and conflict in the economi sphere, conditions essential to future cooperation. The quest for foreign markets, ra materials, investment opportunities and population outlets. Commercial policies, inte national economic conferences and organizations. Colonial rivalries and postwa problems.

**198. Investigation and Report (3) I, II**

Designed to stimulate independent study and investigation; to furnish guidanc in the collection, organization, and presentation of factual material; to improve th technique of term reports. For economics majors only.

**199. Special Study (1-6) I, II**

Individual study. Six units maximum credit. Prerequisite: permission o instructor.

### Graduate Courses

**200A-200B. Seminar in the Development of Economic Thought (2-2) Year I, I**

A critical study of the development of economic thought and of contemporar economic thought, in order to provide a clearer understanding of major economi problems of the day.

**290. Bibliography (1)**

Exercises in the use of basic reference books, journals, and specialized bibliog raphies, preparatory to the writing of a master's project or thesis.

**298. Special Study (1-6) I, II**

Individual study. Six units maximum credit. Prerequisite: permission of staff to be arranged with department chairman and instructor.

**299. Thesis (3)**

Guidance in the preparation of a project or thesis for the master's degree.

# EDUCATION

## IN THE DIVISION OF EDUCATION

### Major

A *teaching major in education* is offered for the general elementary and kinder garten-primary credentials. For a statement of requirements, refer to these credential A major in education is not offered in arts and sciences.

### Minor

A *minor in arts and sciences* is offered in *education.* This minor consists of 15 t 22 upper division units in education selected with approval of the chairman of th Department of Education.

A *teaching minor* is not offered in education.

Students will be admitted to education courses only when they are admitted t teacher education or have permission from the chairman of the Department of Educa tion. Experienced teachers may take education courses for which they have the pre requisites. Students who take a minor in education must have been regularly admitte to teacher education. (See Admission to Teacher Education.)

### Lower Division Courses

**Review of Arithmetic** (0) I, II

**Review of Handwriting** (0) I, II

**Review of Reading** (0) I, II

**Review of Spelling** (0) I, II

Noncredit courses designed to increase competence in the skill subjects. For tudents who do not qualify on the respective sections of the Fundamentals Test equired of all applicants to teacher education.

### Upper Division Courses

**00B. Methods and Materials of Instruction and Audio-Visual Aids** Major (2) Minor (2)

Professional courses in specific teaching fields taken just prior to or concurrently ith the first directed teaching assignment. Each course emphasizes the application f best practice with reference to each subject area named.

Subject fields for sections in 100B are as follows:

**ffered in the Fall Semester**

100B-A.—Methods in Art
100B-B.—Methods in Accounting
100B-E.—Methods in English
100B-HE.—Methods in Home Economics
100B-L.—Methods in Romance Language
100B-Ma.—Methods in Mathematics
100B-Me.—Methods in Merchandising
100B-Mu.—Methods in Music
100B-PE.—Methods in Phys. Ed. (Men)
100B-P.Sc.—Methods in Physical Science
100B-S.—Methods in Shorthand
100B-SA.—Methods in Speech Arts
100B-S.Sc.—Methods in Social Science
100B-SS.—Methods in Secretarial Subjects
100B-T.—Methods in Typing

**Offered in the Spring Semester**

100B-E.—Methods in English
100B-H. Ed.—Methods in Health Education
100B-IA.—Methods in Industrial Arts
100B-L.Sc.—Methods in Life Science
100B-PE.—Methods in Phys. Ed. (Women)
100B-S.Sc.—Methods in Social Science

**02A. Measurement and Evaluation in Elementary Education** (3) I, II, Summer

The use of intelligence and achievement tests in the diagnosis and improvement f learning; construction of objective examinations; problems of evaluation in education; the elements of statistical techniques. Should follow 102B for elementary canidates.

**02B. Child Growth and Development** (3) I, II, Summer

Study of the mental, emotional, social, and physical development during childood and early adolescence. Directed observation required. General education course n family life education. Should precede 102A for elementary candidates.

**02C. Growth and Development of the Adolescent** (3) Irregular

Study of adolescent physiological, psychological, social, and emotional development, including principles of mental hygiene and guidance. Field work with adolescent roups in the community is required.

**02D. Measurement and Evaluation in Secondary Education** (2) Irregular

Problems of evaluation in secondary education, construction of examinations, the lements of statistics, the selection and interpretation of standardized measures, and ppraisal of audio-visual instructional materials. Field work required. Prerequisite: ducation 130.

**105A. Introduction to Psychological Testing** (3) I, II
The basic principles of testing. The selection and critical evaluation of grou tests of intelligence, personality, aptitude, interest and achievement. Prerequisite One of the following courses: Psychology 5, 11; Education 102A, 102D. Not open fo credit to students with credit for Psychology 105A.

**E112A. Methods in Teaching Americanization Classes** (2) Extension only
Methods used in teaching the various grade levels found in Americanizatio classes, including those preparing for their naturalization. Includes discussion of ne skills and techniques in learning to speak, read, and write English; aids in organizin and conducting classes; and in helping teachers to understand backgrounds of foreig born.

**115A. History and Philosophy of Education** (2) I, II, Summer
Historical backgrounds and underlying philosophies upon which the public schoc system has been established. Emphasis on the meaning of education, educational aim and values, and democracy and education. Prerequisite: Senior standing or the equiva lent; minimum of 12 units of education.

**115B. Secondary Education** (3) Irregular
An introduction to understanding the development of secondary education and it present status as a social institution. Topics developed include: Curriculum; teachin methods; audio-visual instructional materials; organization and administration; guid ance; and objectives. Field work required.

**116. Directed Teaching** (2-12) I, II
Systematic observation, participation and teaching under supervision in th campus elementary school, the affiliated elementary, junior high and senior high school During each semester of student teaching a weekly conference period is required a indicated in the time schedule. Prerequisite: Admission to teacher education; educa tion program approved by Coordinator of Elementary or Secondary Education. An grade below C is unacceptable for a credential.

**117A. Elementary Music Education** (2) I, II
Objectives of music teaching; study of the child voice; and organization of son material by grades. Procedure in presenting rote songs, ear training, elementary nota tion, music reading, and part singing. Prerequisite: Music 7A, or the equivalent. No open to students who have had Music 7B.

**117B. Methods in Instrumental Music** (2) I or II
The theory of organizing and conducting school bands and orchestras, and th selection of materials. Provides practical experience in conducting a children's orchestr and teaching sectional groups. Systematic planning for pupils of various ages an abilities.

**119. Art in the Elementary School** (2) I, II
Discussion of the elements and principles of art and their place in the art expres sion and appreciation of the elementary school child. Laboratory experience in elemen tary school problems. Not open to students taking the elementary credential. Pre requisite: Art 6A.

**122. Social Studies in Elementary Education** (2) I, II, Summer
The purpose, scope, organization and development of instructional procedures i the social studies in the elementary school. Development of curriculum units and th analysis of teaching materials.

**123. Science in Elementary Education** (3) Irregular
The construction and use of science equipment, the effective use of audio-visua aids, the use of environmental resources, and the use of texts and supplementary mate rials. Relations to social science in the elementary curriculum are also developed.

**125. Curriculum in Elementary Education** (3) Irregular
Emphasis upon the selection and development of content, teaching methods, an materials as they relate to social needs; evaluation procedures; psychological princi ples, and the nature of the learner.

**126. Literature in Elementary Education** (3) Irregular

Criteria for the selection of children's literature, children's reading interests, the development of units of instruction in the social studies, the use of the verse choir, dramatic readings and similar procedures, and the use of the library.

**129. Arithmetic in Elementary Education** (2) I, II, Summer

For teachers of arithmetic in the elementary and junior high school. Emphasis is placed upon the understanding of the systems of notation and language techniques. Opportunity will be given for the development of instructional materials and procedures.

**130. Educational Psychology** (2) I, Summer

To develop understanding of the applications of psychological research for effective classroom teaching. Observation and field work required. Prerequisite: Psychology 1. Not open to students with credit for Psychology 130.

**134. Behavior Problems in Early Childhood** (1) Summer

Lectures and related readings on the typical behavior problems of two to twelve year olds, for teachers and parents.

**136. Reading in Elementary Education** (3) I, II, Summer

Scientifically developed procedures for determining reading readiness, beginning reading, independence in word recognition, vocabularly development, word analysis, standards of attainment, types of reading programs, and the selection, preparation and use of reading materials.

**138. Workshop in Family Life Education** (3) Summer

Series of lectures, discussions, and laboratory sessions devoted to furthering understanding of the problems of family life education. The student will have an opportunity to develop units suitable for a program of family life education. Community agencies will participate in the workshop.

**143. Adult Education** (3) Irregular

Principles and procedures of providing learning experiences for adults; the nature of adult education and the psychology of leadership; evaluation of programs.

**144. Diagnosis and Remedial Treatment of Difficulties in Reading** (3) Summer

The causes of reading difficulties and the procedures for diagnosis and remedial treatment. Practical work with children with reading problems. Primarily for principals, supervisors and teachers-in-service. Prerequisites: Education 102B or Education 102A, and Education 136, or one year of successful teaching experience.

**145A. Organization and Administration of Music Education** (2) II

Administration of an instrumental music program: purchase, care, depreciation of instruments and equipment; developing interest; ethics; schedule-making; operation and maintenance of music library; personnel and equipment records; the achievement point system; the marching band show; rehearsal procedure.

**146. Education Practicum** (Kindergarten-Primary) (4) I, II, Summer

A continuation of Education 148 and will accompany Education 116 in the kindergarten. A study of the theory of early childhood education providing experience with children of nursery school and kindergarten ages. Prerequisite: Education 147, 148.

**146B. Interpretation of Early Childhood Behavior** (3) Irregular in Summers

For kindergarten-primary teachers treating the analysis and interpretation of early childhood behavior. Emphasis on understanding and interpreting the causative factors in typical behavior of children to parents, social workers, teachers, and others concerned with the guidance of kindergarten-primary children.

**147. Education Practicum** (10) I, II

Required of all students who expect to receive a credential which will qualify them to teach in the kindergarten or in the elementary school. Students should take the course during the next semester after admission to teacher education, which is usually the first semester of the junior year. Registration is strictly limited to those who have been approved by the Committee on Admission to Teacher Education.

This Practicum includes both classroom observation and the study of the principles of education. The course includes Reading (2); Social Sciences in the Elementary School (2); Language Arts (2); Arithmetic (2); Observation (1). Audio-Visual-Radio Instruction (1) is integrated with the course.

**148. Education Practicum** (10) I, II

This course is a continuation of Education 147 and is required of all studen who are candidates for the general elementary credential or the kindergarten-primar credential. An extended analysis is made of the psychology of education in variou fields and application is made through directed teaching experiences. The cours includes Elementary Science Education (2) ; Elementary Art Education (2) ; Elemen tary Music Education (2) ; Educational Psychology (learning process and theory audio-visual education) (2) ; Curriculum in Elementary Education (2) ; Educatio 116, Directed Teaching (2). Prerequisite: Education 147.

**149A. Laboratory in Elementary Education** (3) Summer

A general course in observation and theory, including a study of arithmeti reading, language, music, science, social studies, art, spelling. Students in this cours will observe in the summer demonstration school and discuss with the staff th teaching procedures.

**149C. Laboratory in Rural Education** (6) Irregular in Summers.

Observation in a one-room multigraded summer demonstration school. Student will observe demonstrations, discuss procedures with the staff, and prepare materia for their own schools.

**149D. Workshop in Elementary Education** (3 or 6) Summer

To meet the needs of individual or groups of teachers who desire to stud selected problems in elementary education. The observation of classroom teaching wi be provided for members in attendance. Interested persons should correspond with th Coordinator of Elementary Education, San Diego State College.

**154. Reading in Secondary Education** (3) II (Offered in 1952-53 and alternat years, alternating with Education 144

The nature of the reading program, development of techniques and skills, vocabu lary development, reading in the content fields, the differentiated attack, measurement diagnosis, and remediation.

**155. Guidance in Elementary Education** (3) II, Summer

A study of the basic principles of guidance and their function in the educationa process as applied in the elementary school.

**156. Guidance Conference** (1) Summer

A series of lecture and discussion sessions centering on current problems i counseling and guidance. Designed to serve the needs of any person desiring to kee informed of developments in this area. Admission upon permission of the directo of this conference. Course may be taken twice for credit.

**158. Supervision of Child Welfare and Attendance** (3) Summer

Content includes laws relating to children, guidance principles, social case work agency relationships, conference techniques, home visitation methods, employmen supervision, attendance work, child accounting, familiarity with testing techniques

**161. Legal Aspects of Education** (3) Irregular

A study of the school law of California, important court decisions, rulings of th California State Superintendent of Public Instruction and the Attorney General historical and current trends, and comparative data from throughout the Unite States.

**166. Honors Course** (Credit to be arranged) I, II Refer to the Honors Program

**171. Audio-Visual Conference** (1) Summer

A series of lectures, discussions and demonstrations, centering on problems i the use of audio-visual instructional materials. Designed for teachers, administrators audio-visual representatives, and others interested in current developments in thi area. Course may be taken twice for credit.

**174. Audio-Visual-Radio Education** (3) I, II, Summer

A study of audio-visual-radio aids as they affect learning. Analysis and develop ment of materials of instruction and their presentation ; operation of equipment.

**174BE. Audio-Visual Business Education** (3) Summer

A review of the skills and knowledges necessary to use audio-visual aids, followed by intensive study and research in the literature available and by practice with the materials and techniques that apply to business education.

**175. Creating Audio-Visual Materials for Classroom Use** (3) Irregular

Practice in the creation and evaluation of instructional materials, such as 35 mm. film strips, 16 mm. films, scripts, recordings and other audio-visual materials. Prerequisite: Education 174, or equivalent.

**176. Problems of Speech Correction and Articulation** (3) II

Analysis and discussion of the major articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Not open to students with credit for Speech Arts 176.

**177. The Teaching of Lip Reading** (2) Summer

History, theory and methods of lip reading. Aids for the classroom teacher; program and materials of instruction for the specialized teacher. Opportunities for practice teaching are offered. Not open to students with credit for Speech Arts 177.

**178. Problems of the Hard of Hearing** (3) Summer

The adjustment of the hard-of-hearing group with emphasis on the public school child. State and county hearing programs; audiometric techniques with practice; educational, classroom, and social problems. Meets audiometric certification requirement.

**179A-179B. Nervous Speech Disorders** (3-3) Year, I

Classification and study of speech defects and disorders. Training in corrective technique for public schools; observation. Required for the Special Secondary Credential in Correction of Speech Defects. Not open to students with credit for Speech Arts 179A-179B.

**181. Exceptional Children** (3) I or II

Characteristics and adjustment problems of mental, physical, and emotional deviates; emphasis upon the mentally handicapped.

**182. Curriculum and Methods for Mentally Retarded Children** (3) II or Summer

Selection, organization and presentation of curricular materials for mentally retarded children.

**183. Practicum for Teaching Mentally Retarded Children** (3) Summer

Analysis and interpretation of educational procedures utilized with the retarded learner. A demonstration class will be available for observation. Education 182 must be taken prior to, or concurrently with, Education 183.

**184A. The Secondary School** (4) I, II

To orient the student toward his function as a teacher in the public secondary schools, including basic principles, history and philosophy of education, elementary and audio-visual instruction, and to understand the school as a social institution. Field work required.

Orientation toward understanding teaching as a profession, and the public school as a social institution. Emphasizes history, aims, scope, function, outcomes, and principles of American elementary and secondary education. Field work, including audio-visual experiences, required.

**184B. Development and Learning** (4) I, II

To acquaint the student in secondary education with the nature of development and the learning process, with consideration of mental hygiene, guidance and the place of audio-visual aids. Field work required. Prerequisite: Education 184A.

**184C. The Teaching Process** (4) I, II

To develop teacher competency at the secondary level in professional and community relationships, and in planning teaching, and evaluating learning activities (with emphasis on the use of audio-visual resources and the development of class morale). Field work required. Prerequisite: Education 184B and consent of the instructor.

**185. Workshop for Teaching the Mentally Retarded** (3-6) Irregular
Curriculum and methods of teaching, integrated with a demonstration class. Particular emphasis on the arts and crafts program. Opportunities will be provided for teachers to develop materials of instruction. To meet California credential requirements in the areas described. Not open to students with credit in both Education 182 and 193.

**186. Vision Testing and Hygiene** (2) Irregular
Measurement of visual acuity including an analysis of vision tests, hygiene and physiology of the eye, conservation of sight, and classroom adaptation for the visually handicapped.

**187A-187B-187C. Child Study Laboratory** (2-2-2) I, II
Development of background and procedures for child study and their application to field situations. Field work required. For teachers in service. 187A is prerequisite for 187B, and 187B is prerequisite for 187C.

**188. Techniques of Pupil Appraisal** (3) I, II or Summer
A study of, and practice in, techniques of collecting, assembling, and interpreting data about individual pupils for guidance purposes. Field work required. Prerequisite: Education 102D or 102A, or consent of instructor. Not open to students who have credit for Psychology 105A or Education 105A.

**189. Workshop in Secondary Education** (3 or 6) Summer
Designed to meet the needs of individuals or groups of teachers who wish to develop or continue the study of some problem with the consultation of the College Staff and the San Diego County Curriculum Staff.

**191. Driver Education** (2) Summer
A workshop type course designed to prepare teachers of the course in high school. Enrollment by permission of the instructor.

**199. Special Study** (1-6) I, II, and Summer
Individual study. Six units maximum credit. Prerequisites: open only to senior and graduate students in education who have shown ability to work independently; permission of instructor.

### Graduate Courses

For general requirements for admission to graduate courses, see statement on Admission to Graduate Status in section on Admission and Registration. In addition to these general requirements, 12 units of professional education are prerequisite for enrollment in all graduate courses.

**205. History of Education** (3) Summer
Advanced study of the history of education with emphasis on educational practices as related to present day problems. Prerequisite: Education 115A or equivalent.

**206. Philosophy of Education** (3) Summer
Advanced study of philosophical backgrounds of educational thought; a study of comparative philosophies, and an analysis of selected current trends and problems. Prerequisite: Education 115A or equivalent.

**207. Educational Sociology** (3) Summer
A study of the social, economic, political and moral setting in which present day American education functions. Prerequisite: Education 115A, or equivalent, teaching experience.

**220. Advanced Educational Psychology** (3) I, II, Summer
Advanced study of the research and its application to learning and human growth. Prerequisite: Educational Psych. 130, or equivalent, teaching experience.

**230. Guidance Problems in Secondary Education** (3) I, II, Summer
Individual and group study of the theory and practice of guidance with emphasis upon practical problems of the members of the class.

**232. Problems in Vocational Guidance** (3) Summer
To prepare teachers for vocational guidance in the secondary schools. Includes occupational information, vocational aptitude measurement, and educational guidance. Prerequisite: Education 230, or equivalent.

233. **Guidance Counseling Techniques** (3) I, II
Designed for school counselors. To stress the understandings and procedures necessary for effective interviewing. Prerequisite: Education 230, or equivalent. Not open to students with credit for Psychology 233.

237. **Research in Guidance Problems** (1-3) Summer
Individual study by graduate students who have demonstrated exceptional ability and a need for such work. Admission by permission of the Coordinator of Secondary Education and instructor.

238. **Field Work in School Guidance** (3) II
Application of the principles and procedures in testing, counseling, and related personnel work in the public schools. Weekly seminar sessions with college and cooperating staff. Prerequisite: Permission of instructor and 12 units in guidance and related areas.

239. **Workshop in Pupil Personnel Services** (3) Summer
Application of principles and procedures to specific situations for improvement of pupil personnel services. Individual problems emphasized. Prerequisite: Teaching experience and permission of director of workshop.

240. **Curriculum Construction and Evaluation in Elementary Education** (3) I, Summer
Advanced study of the research in curriculum development, construction, and evaluation. Prerequisites: 12 units of work in elementary education and consent of the instructor.

241. **Problems in the Teaching of Arithmetic** (3) Summer
A study of research and practice in the methods of teaching and in the curriculum of elementary and junior high school arithmetic. Prerequisite: Education 129 or equivalent.

242. **Problems in the Teaching of Reading** (3) Summer
Advanced study of trends in reading instructions. Topics include developmental sequences in reading skills and abilities, reading in the content fields, individual differences, and interests. Students will develop individual projects or problems. Prerequisites: Education 136 and 144 or equivalents.

243. **Seminar in Social Studies in Elementary Education** (3) Irregular
Advanced study of problems in teaching social studies in the elementary school with emphasis on the study of the scientific research in the field. Prerequisite: Permission of instructor.

244. **Seminar in Language Arts in Elementary Education** (3) Irregular
Advanced study of problems in teaching language arts in the elementary school, including spelling, literature and written and oral communication. Emphasis will be on the study of scientific research in the field. Prerequisite: Permission of instructor.

245. **Seminar in Elementary Education** (3) Irregular
A study of the methodology of research with particular reference to the basic research in the psychology and teaching of the elementary school subjects. Prerequisite: 12 units in elementary education and permission of the instructor.

250. **Curricular Problems in Secondary Education** (3) I, II, Summer
Present status and development of the secondary school curriculum with emphasis upon curriculum construction and evaluation. Opportunities provided for study of problems submitted by students. Prerequisite: 12 units in secondary education and consent of the instructor.

252. **General Education in the Secondary School** (3) Summer
A course designed for teachers in service. A study of the function and implementation of general education in the secondary school. Prerequisite: 12 units in secondary education and permission of the instructor.

254. **Advanced Problems in Secondary School Instruction** (3) II, Summer
An analysis of the scientific research and philosophical principles in secondary school instruction. Prerequisite: Teaching experience and permission of instructor.

**256. Recent Trends in Secondary Curriculum** (3) Irregular

Current practices and trends in secondary schools. Extensive individual work on related problems of interest to members of the class. Prerequisite: 12 units in secondary education and permission of the instructor.

**257. Workshop in Intercultural Education** (4) Summer

A cooperative workshop sponsored by the college and the San Diego City Schools to study trends in intercultural education in American schools, including units, curricular and instructional materials and techniques. Enrollment only by application to the Chairman of the Division of Education.

**258. Research in Curricular Problems** (1-3) Irregular

Individual study by graduate students who have demonstrated exceptional ability and a need for such work. Admission by permission of the Coordinator of Secondary Education and instructor.

**260. Federal, State, County and City School Organization and Administration** (3) I, Summer

A study of federal, state, county and city school organization and administration including the inter-relationships of the four levels. Prerequisite: Possession of a valid teaching credential.

**262. The Organization and Administration of Elementary Schools** (3) I, Summer

A study of the problems of personnel, local finance, curriculum, school plant and community relations of elementary schools. Field project required. Prerequisites: Valid General Elementary Credential, teaching experience, Education 155, 240, 260, and 270 and admission to program of Administrative Studies.

**263. The Organization and Administration of Secondary Schools** (3) I, Summer

A study of the problems of personnel, local finance, curriculum, school plant, transportation and community relations of secondary schools. Field project required. Prerequisites: Possession of a valid General Secondary Credential, teaching experience, Education 230, 250, 260 and 270 and admission to program of Administrative Studies.

**264. Elementary School Supervision** (3) II, Summer

Principles and practices of supervision and methods of evaluating instruction and the curriculum in elementary education. Field project required. Prerequisites: General Elementary Credential, teaching experience, Education 155, 240, 260 and 270 and admission to program of Administrative Studies.

**265. Secondary School Supervision** (3) II, Summer

Principles and practices of supervision, curriculum and teaching methods in secondary education. Field project required. Prerequisites: General Secondary Credential, teaching experience, Education 230, 250, 260 and 270 and admission to program of Administrative Studies.

**266. Field Work in Elementary School Administration and Supervision** (2) II

Study of the administration and supervision of an elementary school with the cooperation of a local school administrator and under the supervision of a college staff member. Field projects required. Prerequisite: Admission to the program of Administrative Studies, completion concurrently of all other requirements for the Elementary Administration or Supervision Credential, permission of local school administrator and instructor.

**267. Field Work in Secondary School Administration and Supervision** (2) II

Study of the administration and supervision of a secondary school with the cooperation of a local school administrator and under the supervision of a college staff member. Field projects required. Prerequisites: Admission to the program of Administrative Studies, completion concurrently of all other requirements for the Secondary Administration or Supervision Credential, and permission of local school administrator and instructor.

**268. Seminar in School Administration** (3) Summer
An intensive study of research on selected problems in the field of school administration. Provision will be made for individual work on special topics of interest to students. Prerequisites: Permission of instructor.

**270. School Finance, Business Administration, and Law** (3) II, Summer
A study of public school finance at federal, state and local levels; an analysis of the business administration of schools and a study of school law as it applies to finance, administration and other aspects of school administration. Prerequisites: Possession of a valid teaching credential or permission of instructor.

**271. Supervision of Student Teaching** (2) II
Study of selection, orientation, induction, counseling and evaluation of credential candidates and student teachers; and helping student teachers plan lessons, conduct classroom learning, analyze pupils' difficulties and achievement. Open to experienced teachers interested in the teacher education program.

**274A. Utilizing Audio-Visual Materials in the Classroom** (3) I, Summer
A critical analysis of research evaluating the use of visual, auditory, and other sensory materials in education. Prerequisite: Education 174, or equivalent.

**275. Administering the Use of Audio-Visual Materials** (3) II, Summer
Organizing, supervising, and coordinating audio-visual centers as an integral part of educational systems. Prerequisite: Education 174, or by permission of the instructor.

**278. Educational Leadership** (3) I, Summer
An analysis of the factors and practice in procedures of group and individual leadership in four areas: (a) the community; (b) the teaching staff; (c) the student personnel; (d) the professional field of educational administration and supervision. Prerequisite: Valid teaching credential or permission of instructor.

**290. Procedures of Investigation and Report** (2-3) I, II, Summer
Emphasizes procedures in selecting and writing a project or thesis. Methods of investigation and reporting data. Extensive survey of an area of professional literature to analyze techniques and style. Separate sections for elementary and secondary levels.

**298. Special Study** (1-6) I, II, Summer
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3) I, II, Summer
Guidance in the preparation of a project or thesis for the master's degree.

**316A. Directed Teaching** (3-3) I, II
Systematic observation, participation, and teaching under supervision in an affiliated school. Thirty clock hours of student teaching will usually earn one unit of credit, but the credit finally allowed will depend upon the nature and quality of the teaching done. Any work below a grade of C is unacceptable for a credential. Prerequisites required.

No student can enroll in this course until he has completed Education 184A and 184B, enrolled in Education 100B, and has been admitted to candidacy for the teaching credential.

During the semesters in which the student takes his assignments in student teaching, he must meet with the college supervisor one hour each week for conference and discussion of problems encountered in his teaching.

Students who have had student teaching in preparation for the junior high school or special secondary credential should confer with their departmental and educational advisers concerning partial fulfillment of this requirement as the result of having completed the student teaching required for the credentials mentioned above.

**316B. Directed Internship** (2-6) I, II
Extensive daily participation or teaching in public schools in preparation for a second credential when Directed Teaching has been taken for a prerequisite credential. Application should be made during the preceding semester. Preregistration required.

# ENGINEERING

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in *engineering* for the B.S. degree. Courses in the major are in addition to 45 units of general education courses. Nine units of chemistry, physics, and mathematics may be applied toward general education requirements. Lower division requirements for all engineering students are tabulated under Engineering Curricula below. Upper division requirements: A minimum of 36 upper division units. Specific requirements for the general engineering program and for the programs providing limited specialization are listed under Engineering Curricula below. A minor is not required of engineering majors.

A *teaching major* is not offered in engineering.

### Minor

A *minor in arts and sciences* is offered in engineering. The minor consists of 15 to 22 units in engineering, nine units of which must be in courses carrying upper division credit. The courses should follow a logical sequence approved by the departmental representative.

A *teaching minor* is not offered in engineering.

## ENGINEERING CURRICULA

The curricula below specify the requirements for the general engineering program and for the indicated options. They include recommended electives to fulfill the requirements of general education. General education courses are prefixed with an asterisk (*).

### Lower Division Requirements for all Engineering Students

| | *Units* | |
|---|---|---|
| **Freshman Year** | *1st Sem.* | *2d Sem.* |
| * P.E. activities | ½ | ½ |
| Math. 3A-3B | 3 | 3 |
| Physics 4A | – | 4 |
| Chem. 1A-1B | 5 | 5 |
| * English 1 | 3 | – |
| * Speech Arts 3 | 2 | – |
| * Biology 1 | – | 3 |
| * Psychology 1 | 3 | – |
| | 16½ | 15½ |

| | *Units* | |
|---|---|---|
| **Sophomore Year** | *1st Sem.* | *2d Sem.* |
| * P.E. activities | ½ | ½ |
| Math. 4A-4B | 3 | 3 |
| Physics 4B-4C | 4 | 4 |
| * Econ. 1A-1B | 3 | 3 |
| Engr. 21 and 23 | 3 | 2 |
| Restricted electives | 3 | 3–4 |
| General, Aero., Elect., and Mech.: Engr. 1A, 22 | | |
| Chem.: Chem. 101A, 5A | | |
| Civil: Engr. 1A-1B | | |
| Econ.: Bus. 14A-14B | | |
| Electron.: * Lit. or Phil. and elective | | |
| | 16½ | 15½-16½ |

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* General education courses. (Nine additional units in chemistry, physics, and mathematics may be applied toward general education requirements.)

### Upper Division Requirements for Curriculum in General Engineering

| Junior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Engr. 100A-100B | 3 | 3 |
| Engr. 101A-101B | 2 | 2 |
| Engr. 102A-102B | 3 | 3 |
| Engr. 140 | – | 3 |
| Engr. 141 | – | 2 |
| * Health Educ. 21 | 2 | – |
| * Ind. Arts 5 | 3 | – |
| Math. 118A | 3 | – |
| * Soc. Sci. elective | – | 3 |
|  | 16 | 16 |

| Senior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Engr. 127, 105 | 3 | 3 |
| Engr. 129, 106 | 2 | 2 |
| Engr. 199, 198 | 2 | 2 |
| Engr. 180 | – | 3 |
| * Econ. 170 | 3 | – |
| * Lit. or Phil. | 3 | – |
| † Electives | 3 | 6 |
|  | 16 | 16 |

* General education courses. (Nine additional units in chemistry, physics, and mathematics may be applied toward general education requirements.)

† Electives to include two additional upper division engineering courses and one additional course in industrial arts. Courses to be approved by the Department of Engineering.

### Upper Division Requirements for Curricula Providing Limited Specialization

| Junior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| Engr. 100A-100B | 3 | 3 |
| Engr. 102A-102B | 3 | 3 |
| Engr. 127, 140 | 3 | 3 |
| * Health Educ. 21 | 2 | – |
| * Ind. Arts 5 | 3 | – |
| ‡ * Soc. Sci. elective | – | 3 |
|  | 14 | 9–12 |

| Senior Year | Units 1st Sem. | Units 2d Sem. |
|---|---|---|
| † * Literature or Philosophy | – | 3 |
| * Econ. 170 | 3 | – |
| Engr. 105 | – | 3 |
| Engr. 198 | – | 2 |
| Engr. 180 | – | 3 |
|  | 3 | 8–11 |

* General education courses. (Nine additional units in chemistry, physics, and mathematics may be applied toward general education requirements.)

‡ Chemical engineers take social science elective in first semester of senior year. All students should remove U. S. history-Constitution and California State and Local Government requirements by examination or by taking appropriate social science courses.

† * Electronics engineers take literature or philosophy first semester of sophomore year.

*Additional Requirements for Various Fields of Limited Specialization*

**Aeronautical Engineering:** Engineering 101A-101B, 106, 122, 129, 141, 142, 156; Mathematics 118A.

**Chemical Engineering:** Engineering 106, 129, 141; Chemistry 101B, 110A-110B, 144A-144B; Mathematics 118A; * Social Science elective.

**Civil Engineering:** Engineering 106, 130, 135, 141, 142; Mathematics 118A; Astronomy 113.

**Electrical Engineering:** Engineering 101A-101B, 129, 141; Mathematics 118A; Physics 102, 107.

**Electronics Engineering:** Engineering 101A-101B, 104, 124, 150; Physics 102, 107, 122, 152; Mathematics 118A.

**Engineering Economics:** Engineering elective, one course from Engineering 101A, 101B, 106, 129, or 141; Economics 133, 140, 150; Business 18A, 121.

**Mechanical Engineering:** Engineering 101A-101B, 106, 122, 128, 129, 141, 145; Mathematics 118A.

## Lower Division Courses

**1A-1B. Plane Surveying** (3-3) Year, I

Two lectures and one three-hour field period per week. Semester I: Use, care and adjustment of surveying equipment. Introduction to standard procedures and techniques. Prerequisites: Engineering 2, or equivalent, Math. D, and sophomore standing. Semester II: Computations and map making; land, topographic, and city surveying. Prerequisite: Engr. 1A.

**2. Mechanical Drawing** (3) I, II

Freehand lettering, use and care of drafting equipment, simple orthographic projection, introduction to problems of dimensioning. Open to students lacking credit for a year course in senior high school mechanical drawing.

**21. Descriptive Geometry** (3) I

Fundamental principles of descriptive geometry and their application to engineering problems. Solutions of point, line and plane problems; curved lines and surfaces; intersections of surfaces. One lecture and two three-hour laboratory periods per week. Prerequisite: Engr. 2, or equivalent, and sophomore standing.

**22. Machine Drawing** (3) II

Standard drawing methods and procedures, complete sets of working drawings of simple machine parts, gears and cams; includes tolerance dimensioning, sectioning, threads and fasteners. One lecture and two three-hour laboratory periods per week. Prerequisites: Engr. 21, Math. 3A-3B.

**23. Materials of Engineering** (2) II

A concise presentation of the physical properties of the common materials used in structures and machines, with brief descriptions of their manufacture and fabrication. Two lectures per week. Prerequisite: Sophomore standing.

## Upper Division Courses

**100A-100B. Elements of Electrical Engineering** (3-3) Year, I

Theory and characteristics of electrical equipment with emphasis on industrial applications. Lectures and problems. Semester I: Direct current circuit analysis. D. C. motors and generators. Introduction to alternating current circuits. Prerequisites: Math. 4A, Physics 4B, or permission of the instructor. Semester II: Alternating current circuit analysis. Transformers, alternators, induction and synchronous motors, conversion apparatus, and transmission lines. Prerequisite: Engr. 100A.

**101A. Electrical Engineering Laboratory** (2) I

Laboratory determination of the characteristics of direct current machinery and circuits, single phase alternating current circuits. One three-hour lab. and report per week. Prerequisite: Engr. 100A, or taken concurrently.

**101B. Electrical Engineering Laboratory** (2) II

Laboratory determination of the characteristics of single phase and polyphase circuits, machines, and related equipment. One three-hour laboratory period and report per week. Prerequisite: Engr. 100B, or taken concurrently.

**102A-102B. Analytical Mechanics** (3-3) Year, I

Lectures and problems. Emphasis on engineering applications. Semester I: Principles of statics which deals with the conditions of equilibrium of bodies acted upon by forces. Prerequisites: Physics 4A-4B, Math. 4A. Semester II: Principles of dynamics which deals with the fundamentals of rectilinear and curvilinear motion of particles and rigid bodies, and the rotation of rigid bodies. Prerequisite: Engr. 102A.

**104. Communications** (3) II

Power amplifiers, oscillators, modulators and detectors. Radio transmitters and receivers for amplitude modulation and frequency modulation. Television systems. Antennas and radio wave propagation. Prerequisite: Physics 102 or permission of the instructor.

**105. Fluid Mechanics** (3) II

The statics and dynamics of incompressible and compressible fluids. Viscosity, fluid friction. Dimensional analysis. Fluid measuring instruments. Flow of compressible and incompressible fluids in pipes. Flow of liquids in open channels. Pumps. Prerequisites: Engineering 102A, and Engineering 127.

**106. Fluid Mechanics Laboratory** (2) II

Characteristics of fluid measuring instruments. Fluid flow through pumps, etc. One three-hour laboratory and report per week. Prerequisite: Engineering 105 or concurrent registration.

**122. Machine Design** (4) I

Individual design of a useful machine encompassing fundamental considerations of simple machine parts. Practical design methods utilizing professional literature are stressed. Three lectures and one three-hour laboratory period per week. Prerequisites: Engr. 23, 102A, 140.

**124. Radio Measurements** (2) II

A laboratory course on measurements of the parameters of resonant circuits at radio frequencies. Study of the properties of oscillators, modulators, detectors and wave guides. Prerequisite: Previous or concurrent enrollment in Engineering 104. Students with credit in Physics 124 may not receive credit for this course.

**127. Engineering Thermodynamics** (3) I

An introduction to the basic principles of thermodynamics; laws of perfect gases, vapors and mixtures; cycles. Applications to engineering problems such as the analysis of heat, power, and refrigeration systems, and steady-flow processes. Lecture and problems. Prerequisites: Mathmetics 4A and Physics 4B.

**128. Applied Engineering Thermodynamics** (3) I

The study of various types of heat power equipment; steam generation, turbines, reciprocating engines and auxiliaries; fuels and lubricating oils; gas and oil engines, gas turbines, refrigeration and compressors. The practical application of basic theory to proper, efficient operating practices is stressed. Lectures and problems. Prerequisite: Engineering 127.

**129. Heat Power Laboratory** (2) I

Testing of steam generators and heat balance of same; steam turbine; reciprocating engine; internal combustion engines; flue gases, lubricating oils and boiler feed water. Emphasis upon standardized testing procedures, approved by SAE and ASME, and standard operating procedures. One three-hour laboratory period and report per week. Prerequisite: Engineering 127.

**130. Route and Construction Surveying** (3) I

Application of surveying to engineering problems. Methods of route surveys for highways, railroads, utilities. Construction surveys for buildings and other structures. Earthwork computations. Two lectures and one three-hour field period per week. Prerequisite: Engr. 1B.

**135. Concrete Structures** (3) II

Concrete structures including both plain and reinforced concrete. Practical application of the mathematical theories of mechanics and strength of materials, including analysis and design of such structures as dams, walls, floor slabs, columns, beams, and frames. Prerequisite: Engineering 140 or concurrent registration.

**140. Strength of Materials** (3) II

Elastic properties and strength of engineering materials. Analysis of types of failures. Stress analysis and deformation of simple structural and machine members. Photoelasticity. Lecture and problems. Prerequisite: Engr. 102A.

**141. Materials of Engineering Laboratory** (2) II

Theory and operation of testing machines and auxiliary apparatus. Conduct of tests to determine significant characteristics of commonly used engineering materials. Included are heat treatment of metals, metallographic tests, and photoelasticity. One three-hour laboratory and report per week. Prerequisite: Engr. 140, or taken concurrently.

**142. Stress Analysis** (3) I

Determination of stresses in trusses, beams, and frames. Combined stresses; space structures; general theorems relating to elastic systems; statically indeterminate structures; deflections; analytical and graphical methods of solution. Lectures and problems. Prerequisites: Eng. 102A-102B, 140.

**145. Internal Combustion Engines** (3) II

Application of theory of thermodynamics to internal combustion engines. Esse tial features of design, operating characteristics, and application of gasoline, diesel, a gas engines, and the gas turbine. Lectures and problems. Prerequisites: Physics 4 Math. 4A. Recommended: Engr. 128.

**150. Industrial Electronics** (3) II

Photoelectricity and its applications; rectification and inversion; theory a applications of thyratrons and ignitrons including welding; radio-frequency heatin electrostatic precipitation; motor control and introduction to servomechanisms. Pr requisite: Physics 102.

**156. Aerodynamics** (3) II

Mechanics and thermodynamics of air; wing characteristics; drag; wind tunn testing technique; propellers and power plants; aircraft performance; stability a control. Introduction to compressible aerodynamics. Lectures and problems. Prerequ sites: Engr. 102A-102B.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**180. Principles of Engineering Economy** (3) II

Analysis of the costs of development and promotion, construction, operatio depreciation and depletion. Capital recovery, income, return and yield. Valuations a appraisals, cost analysis and financial analysis. Application to engineering problem Prerequisite: Senior standing.

**198. Senior Report** (2) I, II

Investigation of specific problems of advanced nature. Preparation of report. Pr requisite: Advanced senior standing.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of i structor.

NOTE.—In laboratory courses special emphasis is placed upon the preparation neat, concise, complete and intelligent reports.

## ENGLISH

### IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *English.* Courses in the major are i addition to 45 units in general education courses. Lower division requirements: A least 12 units of work, in addition to English 1 or 41; at least six must be in a yea course. Upper division requirements: A minimum of 24 upper division units in Englis and comparative literature, selected with the approval of a departmental representa tive; two years of lower division work in a foreign language or the equivalent readin knowledge of a language is strongly recommended. A minor is not required of student majoring in English.

Prospective majors of sophomore standing may, with the consent of the cours instructor and subject to general college regulations (see section on Lower Divisio and Upper Division Courses), substitute six units of upper division electives for si units of lower division work, such upper division units to be selected from the following English 101A, 116A, 116B, 118A, 118B, 119A, 119B, 126A, 126B, 143A, 143B.

Students of junior or senior standing may substitute for any deficiencies in lowe division requirements in English (except English 1 or 41) an equivalent number o units of upper division courses selected from the following: English 101A, 116A 116B, 118A, 118B, 119A, 119B, 120A, 120B, 126A, 126B, 143A, 143B, 151, 159.

A *teaching major in English* is offered for the general secondary or junior hig school credential. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *English.* The minor consists of 15 to 22 nits in English, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is offered in English for the general secondary, the special econdary, the general elementary, and the kindergarten-primary credentials. For pecific information refer to the outlines of requirements for these credentials.

### Comparative Literature

For courses in world literature, see Comparative Literature; these courses give redit toward the English major or minor or toward the minor in Comparative iterature.

### Credit in Course Sequences

All elective year courses in the department may be begun in either semester, and ither semester may be taken singly for credit.

### Lower Division Courses

**A. English Fundamentals** (3) I, II
The elements of composition, including drill in grammar and usage; exercises in ocabulary building and in fundamental reading skills; theme writing. Credit in this ourse is equivalent to passing the English A examination and may be counted toward raduation as an elective but not to satisfy lower division English requirements in any urriculum.

**R. Reading Laboratory** (0) I, II
A semi-tutorial service offered by the English Department to those wishing to mprove reading ability, or secure individual help with study problems. Open to all tudents at any level of college work. Consult department chairman.

**W. Writing Laboratory** (0) I, II
A semi-tutorial service offered by the English Department to those wishing assistance in writing projects, either remedial or advanced. Open to students at any level of college work. Consult department chairman.

***1. Freshman Composition** (3) I, II
Study and practice in the expression of ideas and factual materials; principles of organization and of effective style, with emphasis on exposition. Prerequisite: Satisfactory English A examination or credit in English A.

***2A. Freshman Literature: Imaginative** (3) I, II
Training in reading literary materials with insight and vividness.

***2B. Freshman Literature: Modern Thinking** (3) I, II
Designed to develop college reading skills through practice in the analysis of materials at various levels of difficulty.

**10. Recreational Reading** (1) I, II
Development of personal tastes for leisure-time reading through lectures and written reports. May be taken a second time with new materials.

**20. Latin and Greek Word Derivation** (3) I
A general and elementary course in philology. Study of Latin and Greek roots of most frequent occurrence in English, and of the English words derived from them. No prerequisite. Not open to students with credit for General Language 20.

**50A-50B. Masterpieces of American Literature** (3-3) Year, I
Semester I: Major American writers from the beginning to 1860. Semester II: American literature from 1860 to the present.

***52A-52B. Masterpieces of World Literature** (3-3) Year, I
A chronological survey from Homer to modern times. The first semester stresses the classical epic and tragedy. The second semester, beginning with the Renaissance, stresses prose fiction, the drama, and the essay. Not open to students with credit for Comparative Literature 52A-52B.

**A-56B. Survey of English Literature** (3-3) Year, I
The study of some important works of English literature from the Anglo-Saxo period through the Victorian age, with emphasis upon the literary history of eac period.

**60A-60B. Literature and Personality** (3-3) Year, I
The close study of a limited number of the great creators of literature. The goa of the course is to derive, from markedly different specific works, orderly and generalized methods for the interpretation of great literature.

*** 61. Sophomore Composition** (3) I
An elective course designed to give further training to the student who wishe practice in writing beyond the freshman level. Prerequisite: English 1 or equivalent

**62. The Short Story** (3) II
A practical course in writing, including a study of short story techniques and purposes, and the writing of complete short stories. Prerequisite: English 1 or equivalent

**63. Foundations of the Language** (3) II
An introduction to the study of the changes of form and meaning in Engli words with special emphasis on semantics.

## Upper Division Courses

*** 101A. Modern Continental Fiction** (3) II
A survey of leading French, Russian, Scandinavian, Italian, and German novelists and short story writers, from Tolstoy and his associates to the present day. Not open to students with credit for Comparative Literature 101A.

*** 106. Creative Writing** (3) I
A writing workshop in which students are given opportunity to criticize each other's work. Emphasis on narrative and description, but freedom to pursue whatever writing forms may interest the student most. May be taken a second time with new material. Not open to students with credit for Journalism 106.

**110. Recreational Reading** (1) I, II
An advanced course in the group reading of modern drama, poetry and fiction.

**113. American English** (3) I
The development of American English; regional and cultural differences in pronunciation, grammar, and vocabulary.

*** 115. The Bible as Literature** (3) I
A study of the narrative, poetry, and prophecy of the King James version of the Bible. Readings, reports, lectures, and discussions. Not open to students with credit for Comparative Literature 115.

**116A-116B. The Age of Elizabeth** (3-3) Year, I
Semester I: Poetry and prose, exclusive of drama. Semester II: The drama to 1642, excluding Shakespeare.

*** 117A-117B. Shakespeare** (3-3) Year, I
The first semester gives special emphasis to the histories and comedies; the second, to tragedy and the dramatic romances.

**118A-118B. Eighteenth Century English Literature** (3-3) Year, I
The first semester emphasizes the social satire of Swift, Pope, Addison, Steele, Dryden, Gay, Prior; and also the first stirrings of the romantic revolt in a number of important poems and prose works. The second semester is devoted to Johnson and Boswell and their circle and to a significant romantic literature antedating the romantic outburst.

*** 119A. English Romantic Poetry** (3) I
The culmination of the romantic movement in the poetry of Wordsworth, Coleridge, Byron, Shelley, and Keats, in relation to the thought of the revolutionary period.

**119B. The Victorian Poetry** (3) II
Tennyson and Browning with their contemporaries and successors, relating English poetry to nineteenth century life and thought.

**120A. The Seventeenth Century: Milton** (3) II (Alternate years)
The poetry and major prose works of Milton, with stress on the development of his art and mind; the political and religious background and the events in which Milton participated.

**120B. The Seventeenth Century: Milton's Contemporaries** (3) II (Alternate years)
The seventeenth century poets and prose writers, excluding Milton; the Metaphysical and Cavalier poets; the beginnings of the essay and biography.

**126A. Romantic and Victorian Prose** (3) I
Romantic and mid-Victorian prose writers, including Coleridge, Hazlitt, Lamb, DeQuincey, Carlyle, Landor, Macaulay, and Mill, related to the literary, political, and social movements of the period.

*** 126B. Late Nineteenth Century British Prose** (3) II
The essays of Arnold, Thomas Huxley, Newman, Pater, Ruskin, and Stevenson. Study of scientific, aesthetic, and ethical backgrounds.

**129. Contemporary British Literature** (3) II
Selected prose and poetry of England and Ireland from 1914 to the present, including Shaw, Yeats, Synge, Joyce, Maugham, Huxley, D. H. Lawrence, Eliot, the Oxford poets, and the principal authors belonging to the two wars.

**131. American Literature: 1820-1860** (3) I
The study of the important romantic writers, with emphasis on the New England group.

**132. The Frontier and American Literature** (3) I, II
The influence of the frontier upon American literature studied through various regions and movements. Examinations of source materials, biographies, and representative writers.

**133. American Literature: 1860-1910** (3) II
The rise of realism in American literature. Influences, foreign and native, which promoted the movement. Definition of realism. The literary creed of the realists. The romantic attack and the realist defense.

*** 134. American Literature: 1910 to the Present** (3) I, II
Ideas and forms in representative poetry and prose.

**143A-143B. The English Novel** (3-3) Year, I
The history of the English novel from its beginnings to the present century. Emphasis in the first semester will be on the eighteenth century and in the second semester on the nineteenth century.

*** 149. The Study of Poetry** (3) II
A course proceeding from simpler to more complex poetic productions, and designed to bridge the widening chasm between the poet and the ordinary man. Emphasis on current directions in poetry, and on poetry as an oral and auditory art.

**151. Chaucer** (3) I
A study of Chaucer's works, with emphasis on "The Canterbury Tales" and "Troilus and Criseyde."

*** 152A-152B. Survey of Drama** (3-3) Year, I
Study of selected tragedies and comedies from Asiatic, European, English, and American literature, with emphasis upon the human problems depicted therein and upon the timelessness of certain themes, such as those of Electra and Medea. Lectures, discussions, and reports on readings. Not open to students with credit for Comparative Literature 152A-152B.

**162. Magazine Fiction** (3) I
Coaching in constructing and writing short stories for commercial publications. Admission by consent of the instructor. Not open to students with credit for Journalism 162.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**191. Advanced Composition** (3) I

A course designed for prospective teachers of secondary school English. This is not a methods course, but a content course in grammar, composition, and journalism. Required of all teaching majors in English; open to other students as an elective.

**192. The English Language** (3) II

The study of the history of the English language, of its words and structure, of the changes in inflections, pronunciation, vocabulary, and meaning, and of its use as an instrument of communication and human living. Open only to seniors and graduate students.

**195. Literary Criticism** (3) I

A historical survey of the principles and practices of literary criticism from Greek times to the nineteenth century. Readings in the works of Aristotle, Horace, Longinus, Sidney, Boileau, Dryden, Lessing, Sainte-Beuve, Coleridge, and Arnold. Open only to senior and graduate students.

**198. Comprehensive Reading and Survey** (3) II

A study of major movements in English literature through a review of important writers and key works. Individual programs of readings to fill the needs of each student. Open only to senior and graduate students.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**203A-B-C-D. The Critical Study of a Major Author** (2-2-2-2) I, II

A seminar in (A) Shakespeare, (B) Arnold, (C) Mark Twain, or (D) Dickens.

**213A-B-C-D. The Study of a Cultural Period Through Its Literature** (2-2-2-2) I, II

A seminar in (A) the Renaissance, 1500-1660, (B) the Enlightenment, 1660-1780, (C) The Romantic Revolution, 1780-1830, or (D) Industrialism and Democracy, 1830-1914.

**223A-B-C-D. The Study of a Literary Problem** (2-2-2-2) I, II

A seminar in (A) Regionalism in American Literature, (B) the Utopian Theme in Literature, (C) the Idea of the "Gentleman," or (D) European Influences in American Literature.

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

## FRENCH

### IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *French* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: In the major, French 1, 2, 3, 4, 5, 6; in other foreign languages, German 1, 2, or Spanish 1, 2, or Latin 1, 2. Six units in elementary German, Spanish, or Latin may also be applied toward general education requirements. Recommended: History 4A-4B. Upper division requirements: A minimum of 24 upper division units, at least 21 units of which must be in French, including French 198. The remaining three units may be selected from French 115, 116; Geography 118; History 121A-121B, 131A-131B, 141, 142, 143A-143B, 144A-144B; or Comparative Literature 101A, 140A-140B, 152A-152B, 159, in consultation with the chairman of the department.

A person majoring in French must have a minor to be decided upon in consultation with his major adviser.

A *major in arts and sciences* is offered in *Romance Languages.* For specific information on this major, refer to the section on Romance Languages.

A *teaching major* is offered in *French* or in *Romance Languages* for the junior high school and general secondary credentials. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *French.* The minor consists of 15 to 22 units in French, six units of which must be in courses carrying upper division credit.

A *teaching minor* is offered in French for the general secondary, the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

*1. **Elementary** (3) I, II
Pronunciation, oral practice, readings on French culture and civilization, minimum essentials of grammar.

*2. **Elementary** (3) I, II
Continuation of French 1. Prerequisite: French 1 or one year of high school French.

*3. **Intermediate** (3) I, II
Reading in French of cultural material, short stories, novels or plays; oral practice; outside reading with oral and written reports. Prerequisite: French 2 or two years of high school French.

*4. **Intermediate** (3) II
Continuation of French 3. Prerequisite: French 3 or three years of high school French.

5. **Intermediate** (2) I, II
A practical application of the fundamental principles of grammar by means of oral and written work based on French texts. Prerequisite: French 2 or two years of high school French.

6. **Intermediate** (2) II
Continuation of French 5. Prerequisite: French 5 or three years of high school French.

10. **Conversation** (2) I
Practice in the spoken language; practical vocabulary, conversation on assigned topics; simple dialogues and plays. Prerequisite: French 2 or two years of high school French.

11. **Conversation** (2) II
Continuation of French 10. Prerequisite: French 10 or French 3, or three years of high school French.

*15. **French Civilization** (2) I
The major currents and characteristics of French culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

*16. **French Civilization** (2) II
Continuation of French 15. No prerequisite.

8A-8B. **Scientific Reading** (3-3) I
Reading taken from the fields of chemistry, physics, medicine, zoology, biology, etc. Outside readings of books and periodicals, with written reports. Prerequisite: French 2 with a grade of C or two years of high school French.

### Upper Division Courses

**101A-101B. Conversation and Composition** (3-3) Year, I (Offered in 1954-55)
Translation into French from moderately difficult English prose. Outside reading of modern French prose, with written reports in French monthly. Readings and oral discussions in French of various facets of French life and culture. Prerequisite: French 4 and 6, or their equivalent, with a grade of C, or permission of instructor.

**105A-105B. Modern French Drama** (3-3) Year, I
Plays of Victor Hugo, de Vigny, de Musset, Scribe, Augier, Dumas fils, Pailleron, Brieux, Hervieu, Maeterlinck, Rostand, and others read and discussed as to subject matter and technique. Outside reading and reports. Prerequisite: French 4 and 6, or their equivalent, with a grade of C.

**107A-107B. Eighteenth Century Literature** (3-3) Year, I (Offered 1956-57)
The works of Montesquieu, Voltaire, Rousseau, the Encyclopédistes, as well as the theatre and novel of the period. Outside reading and reports. Prerequisite: French 4 and 6, or their equivalent, with a grade of C.

**110-110B. Modern French Novel** (3-3) Year, I (Offered in 1955-56)
The French novel from Victor Hugo to the present day, including such authors as: Hugo, Dumas, Stendahl, Balzac, Flaubert, Loti, Anatole France, Bourget, Bordeaux, Bazin, Barrès, Romain Rolland, A. Gide, Marcel Proust, and others. Class reading, outside reading, and reports. Prerequisite: French 4 and 6, or their equivalent, with a grade of C.

**111A-111B. Seventeenth Century Dramatic Literature** (3-3) Year, I (Offered in 1954-55)
Reading in class of plays of Molière, Corneille, and Racine. Outside readings and lectures on the background of the seventeenth century in France. Prerequisite: French 4 and 6, or their equivalent, with a grade of C.

*** 115. French Civilization** (2) I
An advanced course in French of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

*** 116. French Civilization** (2) II
Continuation of French 115. Prerequisite: sophomore standing.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**198. Comprehensive Reading and Survey Course** (3) II
Designed to fill up the gaps in the reading done in courses. Class meeting once a week for guidance, reports, and quizzes. Required of all seniors majoring in French.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**214. Contemporary French Literature** (2) I
An intensive study of the current movements and techniques in the novel, poetry, and theatre in France from 1900 to the present day. Class discussion, outside readings, written reports. Prerequisite: Nine units of upper division French and graduate status.

**220. Explication de Textes** (2) II
An introduction to the analytical French approach to the detailed study of literature. Demonstrations by instructor and students. This course aims to give teachers of French a greater mastery of French language and literature. Prerequisite: Nine units of upper division French and graduate status.

**290. Bibliography** (1) See Romance Languages

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**99. Thesis** (3)
Master's degree candidates in French are expected to substitute a comprehensive xamination for the thesis. In unusual cases a student may write a thesis with the ermission of the department.

# GENERAL CULTURE

## IN THE DIVISION OF FOREIGN LANGUAGES

Major or minor work is not offered in general culture courses. These courses re carried as part of the offerings of the Foreign Languages Department. They are onducted in English and are open to all students. A knowledge of foreign language is ot required.

### Lower Division Courses

***15. French Civilization** (2) I
The major currents and characteristics of French culture, as expressed through he centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

***16. French Civilization** (2) II
Continuation of French 15. No prerequisite.

***15. German Civilization** (2) I
The major currents and characteristics of German culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English No prerequisite.

***16. German Civilization** (2) II
Continuation of German 15. No prerequisite.

***15. Spanish Civilization** (2) I
The major currents and characteristics of Hispanic life and culture, as expressed through the centuries in literature, art, philosophy, music and science. Conducted in English. No prerequisite.

***16. Spanish Civilization** (2) II
Continuation of Spanish 15 with emphasis on Spanish America. No prerequisite.

### Upper Division Courses

***115. French Civilization** (2) I
An advanced course in French culture of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

***116. French Civilization** (2) II
Continuation of French 115. Prerequisite: sophomore standing.

***115. German Civilization** (2) I
An advanced course in German culture of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

***116. German Civilization** (2) II
Continuation of German 115. Prerequisite: sophomore standing.

***115. Spanish Civilization** (2) I
An advanced course in Hispanic culture of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

***116. Spanish Civilization** (2) II
Continuation of Spanish 115 with emphasis on Spanish America. Prerequisite: sophomore standing.

# GENERAL LANGUAGE

## IN THE DIVISION OF LANGUAGES AND LITERATURE

Major or minor work is not offered in general language.

### Lower Division Courses

**20. Latin and Greek Word Derivation** (3) I

A general and elementary course in philology. A study of Latin and Greek root of most frequent occurrence in English, and of the English words derived from them No prerequisite. Not open to students with credit for English 20.

**30. Pronunciation of French, Italian and German** (1-3) II

A course designed especially to meet the needs of singers, radio announcers, etc No prerequisite. This course may be taken for one, two or three units of credit depending on the individual student's need.

# GEOGRAPHY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *geography* for the A.B. degree. Course in the major are in addition to 45 units in general education courses. Lower division requirements: Geography 1, 2; Geology 1A-1B. Recommended: A reading knowledg of German and French. Upper division requirements: A minimum of 24 upper division units in geography, or 18 units in geography and six units selected from related field with approval of the chairman of the department. A minor is not required; however students are urged to complete one minor.

A *teaching major* is not offered in geography; however, courses in geography may be used as part of the *social science major* for the general junior high school credential or the general secondary credential. For specific information, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *geography*. The minor consists of 15 to 22 units in geography, six units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in geography for the general secondary credential however, it may be used as a part of the *social science minor* for the special secondary the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

*** 1. Introduction to Geography: Physical Elements** (3) I, II

The nature of maps, weather and climates of the world; natural vegetation; land forms and their associated soils, with reference to their climatic relationships; the seas and their coasts. One field trip. This course is classified as a natural science. (See general education requirements.)

*** 2. Introduction to Geography: Cultural Regions** (3) I, II

The regional differentiation of the world by human activity; areal bases of economy and nationality. Not open to students with credit for Geography 12A or 12B. Prerequisite: Geography 1.

**3. Elementary Meteorology** (3) I, II

An elementary study of the earth's atmosphere and changes in it which produce our weather and influence human affairs. Special attention given to local conditions, instruments, and records.

*** 10. Economic Geography** (3) I, II

Beginning course in economic geography designed for commerce and economic majors.

**12A-12B. Culture Worlds** (3-3) I, II
A study of the evolution, distinguishing cultural characteristics and physical features of the major culture regions of the world, with emphasis on the role man has played in the alteration of the natural landscape. Not open to students with credit for Geography 2.

### Upper Division Courses

**112. Geography of California** (3) II
The physiographic regions of California and the cultural landscapes developed by the successive cultural groups. Prerequisite: Geography 1 or consent of instructor.

**113. Climatology** (3) II
A survey of the principal classifications of climates of the world; regional characteristics of climate; relations to soils, vegetation, and human activities. Prerequisite: Geography 1 or consent of instructor.

**117. Geography of Northern and Eastern Europe** (3) II
A study of the cultural development of the countries of northern and eastern Europe in relation to physical background and historical evolution. Prerequisite: Geography 1 or consent of instructor.

**118. Geography of the Mediterranean Area** (3) II
A study of the cultural development of the countries of Southern Europe, Western Asia, and North Africa in relation to physical background and resources. Prerequisite: Geography 1 or consent of instructor.

**119. Geography of South America** (3) II
A study of the physical regions and human geography of South America, including a review of the history of colonization and the exploitation of resources. Prerequisite: Geography 1 or consent of instructor.

**120. Geography of Middle America** (3) I
A study of the physical and human geography of Mexico, Central America, and the islands of the Caribbean, including a review of the history of colonization and the exploitation of resources. Prerequisite: Geography 1 or consent of instructor.

**121. Geography of North America** (3) I
The natural regions of North America, their formation and economic and historical development. Prerequisite: Geography 1 or consent of instructor.

**124. Geography of Asia** (3) I
The cultural regions of Asia, their physical environment, and historical development. Prerequisite: Geography 1 or consent of instructor.

**125. Geography of the Pacific Basin** (3) II
A geo-political approach to the study of the islands in, and the lands marginal to, the Pacific Ocean. Prerequisite: Geography 1, or consent of the instructor.

**135. Geography of the San Diego Area** (3) II
Directed individual urban and rural field work in the San Diego area; the mapping of a small area and making its geographic interpretations. Prerequisite: Geography 1 and 2 or consent of instructor.

*** 145. Conservation of Natural Resources** (3) II
Nature and extent of mineral, soil, water, forest, and wild life resources and their conservation; with particular emphasis on the United States, against a general background of world resources. Conservation philosophies and practices, and their geographic bases. Prerequisite: Geography 1 or consent of instructor.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors program.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**200A-200B. Seminar** (2-2) Year, I

**290. Bibliography** (1)

Exercises in the use of basic reference books, journals, and specialized bibliog raphies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff to be arranged with department chairman and instructor.

**299. Thesis** (3)

Guidance in the preparation of a project or thesis for the master's degree.

## GEOLOGY

### IN THE DIVISION OF PHYSICAL SCIENCES

Major work is not offered in geology. Students preparing for later professiona training in geology should plan on completing Chemistry 1A-1B; Physics 4A-4B-4C Mathematics 3A-3B; Engineering 1A-1B, 21A; and Geology 1A-1B, 21 and 100.

A *teaching major* is not offered in geology; however, courses in this field may be used as part of the *general science major* for the general junior high school credential For specific information, refer to this credential.

### Minor

A *minor in arts and sciences* is offered in geology. The minor consists of 15 to 22 units in geology, six units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in geology; however, courses in this field may be used as part of the *general science minor* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to these credentials.

### Lower Division Courses

**1A. Physical** (4) I

The composition, origin, and distribution of earth materials, and their modification through mechanical and chemical process of change. Three lectures and one three-hour laboratory period weekly with related field study during the semester. (Not open to students who have had Geology 2.)

**1B. Historical** (4) II

Theories of earth origin, and the evolutionary history of the earth as traced through rock and fossil records. Consideration of the Paleontologic Sequence. Three lectures and one three-hour laboratory period weekly, with arrangement for field study and conference during the semester. Prerequisite: Geology 1A or equivalent.

***2. General Geology** (3) I, II

Earth materials and processes, the development of land forms, and a brief consideration of the history of the earth. Open to all students except those with previous credit in geology. No prerequisites.

***3. General Geology Laboratory** (1) I, II

Recognition of common earth materials with experience in both field and map relationships. Designed to accompany Geology 2, but entirely separate and complete in itself. One three-hour laboratory period weekly. Open to all students except those with previous laboratory credit in geology. No prerequisites.

***4. Physiography of United States** (3) II

Geologic history and present features of the main physiographic provinces of United States. Prerequisite: Geology 1A or 2.

**21. Elementary Mineralogy** (4) I

Practice in the determination of common minerals and rocks, their geologic environment, utilization and economic significance. Two lectures and two three-hour laboratory periods weekly. No prerequisite.

**2. Advanced Mineralogy** (4) II
Continuation of Geology 21 with emphasis on the origin, concurrence, identifica-ion, and classification of the rocks in which the minerals occur. Two lectures and two hree-hour laboratory periods weekly. Prerequisite: Geology 21.

### Upper Division Courses

**100. Structural Geology** (3) I
The evolution and description of the structural and topographical features of the earth. Faulting, folding, and orogenic forces with practical illustrations from the North American Continent and California geologic conditions. Lectures, discussions, and occasional field trips. Prerequisite: Geology 1A-1B or equivalent.

**101. Museum Work** (1-2) I, II
Selection and preparation of materials for the college museum collections. Emphasis upon creation of self instructive displays for use on the elementary and secondary as well as the collegiate level. Prerequisite: Geology 1A-1B, and consent of the instructor. May be repeated for maximum not to exceed six units where quality of work and student capacity justify.

**102. Geology of California** (3) II
Directed reading and group discussion of California geologic literature. Designed to acquaint the student not only with the important structural and geomorphic units of the State but with the variety of important source materials of geologic literature as well. Use of bibliographies, state and federal surveys, research publications, etc. Prerequisite: Geology 1A-1B, and consent of the instructor.

**108. Field Geology** (1-4) I, II
Field instruction in geologic methods. Reconnaissance of adjacent unmapped areas with preparation of a geologic map and accompanying report. Work accomplished primarily on week-ends with minimum classroom activity during the week for organizational details. Prerequisite: Geology 1A-1B, and consent of the instructor.

**166. Honors Course** (Credit to be arranged) I, II
Special work in any of several phases of geologic science for students of demonstrated ability. Refer to the Honors Program.

**199. Special Study** (1-6) I, II
Individual study in field, library, laboratory, or museum work. Six units maximum credit. Prerequisite: permission of instructor.

## GERMAN

## IN THE DIVISION OF LANGUAGES AND LITERATURE

Major work is not offered in German.

A minor in arts and sciences is offered in German. The minor consists of 15 to 22 units in German, six units of which must be in courses carrying upper division credit.

### Lower Division Courses

*1. **Elementary** (3) I, II
Pronunciation, oral practice, readings on German culture and civilization, minimum essentials of grammar.

*2. **Elementary** (3) I, II
Continuation of German 1. Prerequisite: German 1 or one year of high school German.

*3. **Intermediate** (3) I, II
Reading in German of cultural material, short stories, novels or plays; oral practice; outside reading with oral and written reports. Prerequisite: German 2 or two years of high school German.

*4. **Intermediate** (3) II
Continuation of German 3. Prerequisite: German 3 or three years of high school German.

**5. Intermediate (2) I, II**

A practical application of the fundamental principles of grammar by means o oral and written work based on German texts. Prerequisite: German 2 or two year of high school German.

**6. Intermediate (2) II**

Continuation of German 5. Prerequisite: German 5 or three years of high schoo German.

**10. Conversation (2) I**

Practice in the spoken language; practical vocabulary; conversation on assigne topics; simple dialogues and plays. Prerequisite: German 2 or two years of hig school German.

**11. Conversation (2) II**

Continuation of German 10. Prerequisite: German 10, or German 3, or thre years of high school German.

*** 15. German Civilization (2) I**

The major currents and characteristics of German culture, as expressed throug the centuries in literature, art, philosophy, music and science. Conducted in English No prerequisite.

*** 16. German Civilization (2) II**

Continuation of German 15. No prerequisite.

**8A-8B. Scientific Reading (3-3) I**

First semester, readings in scientific reader on chemistry, physics, etc.; occasional written reports on scientific subjects read outside of class; sight reading Second semester, readings in special scientific or technical works; weekly writte reports required; sight reading. Prerequisite for 8A: German 2 with a grade of C o two years of high school German; for 8B: German 8A or German 3, with a grade o C, or three years of high school German.

## Upper Division

**101A-101B. Advanced Conversation and Composition (3-3) Year, I**

Translation into German of moderately difficult English prose. Free composition in German, written and oral. Outside reading of modern German plays and prose discussions in German. Oral and written practice in conversational German. Prerequisite: German 4 and 6, or their equivalent, with a grade of C, or permission of instructor

*** 115. German Civilization (2) I**

An advanced course in German culture of the past and present, with emphasis on the arts, philosophy, and literature. Lectures, class discussions, outside readings, written reports on individual topics. Conducted in English. Prerequisite: sophomore standing.

*** 116. German Civilization (2) II**

Continuation of German 115. Prerequisite: sophomore standing.

**142. The Golden Age of German Literature (3) II**

Masterpieces of German literature from the 18th and early 19th centuries. Lectures in English, readings and written reports in German. Not open to students with credit for Comparative Literature 142.

**199. Special Study (1-6) I, II**

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

# HEALTH EDUCATION

## IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

An *arts and sciences major* is not offered in health education.

A *teaching major in health education* is offered for the general secondary credential. This major is designed around the plan for a general major and may be used for the A.B. degree by students who have been admitted to candidacy for the general secondary credential and have completed a minimum of eight units in professional education courses, including Education 184A-184B, by the date of degree candidacy. For a statement of requirements refer to the general secondary credential.

### Minor

A *minor in arts and sciences* is offered in *health education.* The minor consists of 15 to 22 units in health education, nine units of which must be in courses carrying upper division credit. Courses will be determined in consultation between student and departmental representative.

A *teaching minor in health education* is offered for the general secondary and the special secondary credentials. For a statement of requirements, refer to the credential.

### Lower Division Courses

***21. Principles of Healthful Living (2) I, II**

An approach to the personal health problems of college students. Scientific health information is provided, and an attempt is made to promote wholesome attitudes and desirable practices relating to healthful living. Includes instruction as required by statutes on safety, fire prevention, and harmful effects of alcohol and tobacco. Required of all freshmen.

**65. Community Health (3) I, II**

Community health problems; the role of the citizen, of the public, and of community health agencies in promoting and protecting the health of the community.

***90. Physiology of Reproduction (1) I, II**

A series of lectures and discussions dealing with normal and abnormal physiology and anatomy of reproduction; facts and frauds in sex hygiene, and related topics. Not open to students with credit for Home Economics 90.

### Upper Division Courses

**145. Safety Education and Accident Prevention (3) II**

Highway safety, the fundamentals of safety programs and techniques in home, school and industry. Partially satisfies the requirements for state credential in driver education.

**151. Health Education for Teachers (2) I, II**

The teacher's function in the different aspects of the school health program; environment, services, and instruction. Special attention is given to materials and material sources, and to community relationships and resources. Separate sections for elementary and secondary teachers are offered.

**152. Health Education Programs (3) I**

The construction of the health education program including objectives, scope and sequence of instruction, teaching methods, source materials and evaluation procedures; practice in building instructional units.

**153. Administration of the School Health Program (3) II**

Administrative responsibilities and procedures in organizing and conducting the school health program. Principles, policies, and practices involved in instruction, service, environment, and community relationships. Partially fulfills Health and Development Credential requirement for nurses.

**154. Workshop in Health Education** (2) Summer

For elementary and secondary administrators, school nurses, and teachers. Th workshop provides opportunities for participants to work together toward the improvement of the total school health program in such areas as health instruction, healt services, health environment, and community health.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**200. Evaluation Procedures in Health, Physical Education and Recreation** (2)

A study of tests and measurements in the profession with practice in their use construction and interpretation of results. Not open to students with credit for Physica Education 200.

**202. Problems in Health Education** (2) (Alternate Years)

Current problems in Health Education, studied through a review of the literature discussion of trends, observation of school situations, together with the analysis an evaluation of actual problems. Written reports required.

**298. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3) I, II

Guidance in the preparation of a project or thesis for the master's degree.

## HISTORY

### IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *history* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division: Required in the major: History 4A-4B, or 8A-8B. Recommended in general education for majors: Political Science 1A-1B, or 71A-71B, or Economics 1A-1B. Both of the above history courses are recommended for students planning to major in history. No freshman shall enroll in more than one lower division course in history during any one semester without the permission of the department. Upper division requirements: A minimum of 24 upper division units in history, including History 198, and a minimum of a year of concentration in each of three of the following fields: (a) Ancient and Medieval; (b) Modern Europe; (c) United States; (d) Latin America; (e) Pacific Area and the Far East. These courses must be selected under the guidance of the chairman of the department. A reading knowledge of one foreign language is strongly recommended. History majors are not required to complete a minor.

A *teaching major* is not offered in history; however, courses in history may be used as part of the *teaching major in social sciences* for the general secondary and general junior high school credentials. For statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *history*. The minor consists of 15 to 22 units in history, nine of which must be in courses carrying upper division credit, including a year course.

A *teaching minor in history* is offered for the general secondary credential. Courses in history may be used as part of the social teaching science minor for the special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Explanation of Courses

NOTE: History 17A-17B does not count toward credit for a major in history.

Any history course, with the exception of History 270A-270B, may be taken either semester, the A part not being a prerequisite to the B part.

### Lower Division Courses

***4A-4B. History of Modern Europe** (3-3) Year, I, II
A survey of European society, institutions and politics from about 1500 to the present. Fall semester: 1500-1799. Spring semester: 1799 to the present.

***8A-8B. History of the Americas** (3-3) Year, I
Survey of the history of the western hemisphere from its discovery to the present time. This year course meets the graduation requirement in American history, institutions and ideals.

***17A-17B. History of American Civilization** (3-3) Year, I
Survey of the political and social development of the United States, with emphasis upon the rise of American civilization and ideals. This year course meets the graduation requirement in American history, institutions and ideals, and the United States Constitution. The second semester course, 17B, also covers the required materials in California state and local government.

### Upper Division Courses

**111A-111B. Ancient History** (3-3) Year, I
(Offered in 1953-54 and alternate years)
Fall semester: Greek history to the Roman conquest. Spring semester: Roman history to the fifth century A.D.

***121A-121B. Medieval History** (3-3) Year, I
(Offered in 1952-53 and alternate years)
Survey of the main events of European social, cultural, religious, political and economic history, between 500 and 1400 A.D.

**131A-131B. Renaissance, Reformation and Counter-reformation** (3-3) Year, I
(Offered in 1953-54 and alternate years)
A history of personalities and events connected with the social, political, cultural, economic and religious change between 1300 and 1600.

**141. Europe in the Seventeenth and Eighteenth Centuries** (3) I
European thought, politics and international relations from the Thirty Years' War and Louis XIV to 1763.

**142. The French Revolution and Napoleonic Era** (3) II
Study of conditions in France prior to 1789, the Revolution, 1789-1799, the organization of France and Europe under Napoleon, character of his empire, and the reorganization of Europe at the Congress of Vienna.

**143A-143B. Europe in the Nineteenth Century** (3-3) Year, I
Reaction in Europe, the development of nationalism, the impact of industrialism, and the background of World War I. Covers period 1815-1914.

**144A-144B. The World Wars** (3-3) Year, I
(Offered in 1952-53 and alternate years)
Developments from 1914 to the present. Semester I: World War I, the peace settlements, and the background of World War II. Semester II: World War II and its aftermath.

**151A-151B. History of England** (3-3) Year, I
Political, constitutional, social and economic developments since 1066. Designed for prelegal students, majors in English, and as a background for American History.

**156A-156B. History of British Expansion** (3-3) Year, I
Study of the growth and development of the British Empire from the first overseas empire to the present. History 156B not open to students with credit for Political Science 160.

**161. Mexico and Caribbean Countries** (3) I
Special attention to relations between the United States and these countries, and to recent developments in Mexico.

**162. South America Since Independence** (3) II
Republics of South America. Development of nationality, struggles for political stability, exploitation, diplomatic and commercial relations with the United States, and other international problems of South America. Survey of present-day conditions.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**171A-171B. Rise of the American Nation** (3-3) Year, I
(Offered in 1952-53 and alternate years)
Semester I: English colonization in North America, development of colonial institutions and political customs, and areas of international conflict during 18th century. Semester II: The Revolution and establishment of the government under the Constitution of 1787. Covers period to 1814.

*** 172A-172B. American Constitutional Development** (3-3) Year, I
A study of the work of the Convention of 1787 and of significant phases of American constitutional law. Not open to students with credit for Political Science 139A-139B. This year course meets the graduation requirement in American history, institutions and ideals, and United States Constitution. The second semester course, 172B, also covers the required materials in California state and local government.

**173A-173B. The Expansion of the United States** (3-3) Year, I
(Offered in 1953-54 and alternate years)
Lectures and readings on Jacksonian democracy, territorial expansion and the Mexican War, the slavery controversy, Civil War and Reconstruction, and attention to the growth and progress of the United States to the close of the nineteenth century.

**175A-175B. The United States in the Twentieth Century** (3-3) I
The rise of the United States to the position of a world power; social and economic problems posed by the machine age; political action and adjustment, actual and proposed, intended as solutions for these problems.

**176A-176B. American Foreign Policy** (3-3) Year, I
Lectures and readings in the field of American foreign relations since 1776, with special emphasis, in the second semester, upon affairs since 1900. A general survey course. Not open to students with credit for Political Science 158A-158B.

*** 179A-179B. Intellectual History of the American People** (3-3) Year, I
A study of the ebb and flow of ideas in the United States since the founding of the English colonies, with special attention devoted to social and political thought. This year course meets the graduation requirement in American history, institutions and ideals.

**181A-181B. History of the West** (3-3) Year, I
The American frontier: Expansion, exploration, settlement and building of the new states, with emphasis upon frontier problems of defense, communications, finance, etc.; the development of cultural institutions. A critical examination of the causes, effects and results of the frontier experiences of the American people.

**189. History of California** (3) I, II
The economic, social, intellectual, and political development of California from the earliest times. Emphasis will be on the founding of California, international struggles for California; American conquest and Gold Rush Era; development of California as a state. This course meets the graduation requirement in California State and Local Government.

**190A-190B. History of the Pacific Ocean Area** (3-3) Year, I
A general survey of the history and civilization of the peoples of the Pacific, with special emphasis upon exploration, trade, international rivalries, and social evolution of the island areas. (Formerly History 9A-9B.)

**191A-191B. History of the Far East** (3-3) Year, I
Particular emphasis during the first semester upon the history, both internal and international, of the Far East through the nineteenth century. The second semester will be devoted to a consideration of developments in the twentieth century.

**192. History of Russia** (3) II
A general survey emphasizing the period since Peter the Great; the Russian Empire's relations with its national minorities; Tsarist experiments in political and social reform; revolutionary socialism; the development of the U. S. S. R.

**193. History of China** (3) I
A survey of Chinese history and institutions from antiquity to the present.

**194. History of Japan** (3) I (Offered in 1953-54 and alternate years)
A general survey of the political, economic and social development from the foundation of the empire to contemporary times. Special attention will be given to religions, philosophy, literature, and the arts.

**198. Special Course for Advanced Students** (2) II
Required of all students with a history major. To be attended during the senior year. Open to social science majors.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

### Graduate Courses

**270A-270B. Seminar** (2-2) Year, I
Required of all candidates for the M.A. degree in history. Prerequisite: permission of instructor. 270A is a prerequisite for 270B.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

## HOME ECONOMICS
### IN THE DIVISION OF FINE ARTS

Major work is not offered in home economics. Students may elect a general major with one of the fields of concentration in home economics. For specific information, refer to the Home Arts Curriculum in the section of the bulletin entitled: Preprofessional and Vocational Curricula.

A *teaching major* is not offered in home economics; however, students planning to complete requirements for a special secondary credential in home economics should take the following courses in addition to courses in home economics: Chemistry 2A-2B. Recommended: Physics 5, Biology 1 or 3, Zoology 165, English 2A, History 17A-17B or Political Science 71A-71B, Health Education 90, Art 6A, 8, and 61B, Business 20, and Sociology 135.

### Minor

A *minor in arts and sciences* is offered in *home economics*. The minor consists of 15 to 22 units in home economics, nine units of which must be in courses carrying upper division credit. Lower division requirements: Home Economics 5 or 62 and 10 or 11. Upper division requirements: Home Economics 105 or 100, 150 and 170. Electives may be chosen from Home Economics 1, 55, 61A, 101, 135, and 160A.

A *teaching minor in home economics* is offered for the general secondary, general junior high, and special secondary school credentials. For statement of requirements, refer to these credentials. A student with a minor in home economics may teach home economics in junior high school with a general junior high school credential. Through counseling with the adviser in home economics, a student may so extend the minor in home economics that the special secondary credential in home economics may be obtained with a minimum amount of additional work in the field.

## Lower Division Courses

***1. General Home Arts (3) I, II**
A general education course in family life education. Consideration of necessary preparation for marriage with emphasis on a stable, happy democratic family life family budgets and money management; finding a home to buy, build or rent; child care, proper training and guidance; home safety. Open to men and women.

***5. Foods (3) I**
A general education course in practical arts. Deals with the problems faced in planning meals in which the foods are well cooked and appetizing and serving meals in ways suited to the family situation; safety in the kitchen. Nutrition, economic and management problems are stressed. One lecture and two laboratory sections per week.

***10. Clothing Fundamentals (3) I, II**
A general education course in practical arts. Selection of clothing with self-analysis as a basis; wardrobe planning and buying procedures. Commercial patterns and their adaptation; fitting and construction principles applied to cottons.

**11. Advanced Clothing (3) I**
Fitting and construction processes applied to wool, silk, and synthetics, emphasizing fundamental principles of handling. Prerequisite: Home Economics 10 or equivalent.

**55. Household Equipment (2) I**
Selection, methods of operation and care of household appliances. Equipment of various types used and tested for safety, efficiency and cost of operation. Efficient kitchen arrangement and storage space in relation to the well-being of the family.

**61A. Nutrition (2) II**
Practical problems of nutrition including food requirements, food selection, and food habits. (For men and women.)

**61B. Nutrition Laboratory (1) II**
Nutrition principles applied to food preparation, meal preparation and special diets. Open to prenursing students. One three-hour laboratory section per week.

**62. Food and Nutrition (3) II**
Selection, purchase, and service of meals with a consideration of nutritional needs of family groups, food habits and social customs. Open to all students except prenursing students.

**90. Physiology of Reproduction (1) I, II**
A series of lectures and discussions dealing with normal and abnormal physiology and anatomy of reproduction; facts and frauds in sex hygiene, and related topics. Not open to students with credit for Health Education 90.

## Upper Division Courses

**100. Advanced Clothing Design (Tailoring) (3) II**
Principles of tailoring; planning and construction of coats and suits. Prerequisite: Home Economics 11.

**101. Clothing Selection (3) I**
Aims to develop taste in dress through a better understanding of the relation of art principles, psychology, fashion trends, personality and physical characteristics to individuals. History of costume is studied briefly as an aid in understanding recurring cycles in fashion. A consideration of buymanship information necessary in wardrobe selection to insure satisfaction and economy.

**105. Family Meals (3) II**
This course deals with the planning, preparing, and serving of attractive, well-balanced meals for different income levels, and for various occasions. The student will have responsibility for menu making, food purchasing, and meal management.

**120. Demonstration Methods (1) Irregular**
Class discussions and demonstrations with emphasis upon individual experience in organizing demonstration materials and in acquiring demonstration techniques. Observation and evaluation of professional demonstrations. Prerequisite: Nine units in Home Economics courses.

*** 135. Marriage and the Family** (3) I, II

Preparation for marriage. Prediction scales for evaluating success or failure in marriage. Parent-child relationships; factors in successful and unsuccessful marriages; higher education and the birth rate; married women in industry and professions; desertion and divorce. Not open to students who have credit for Sociology 45 or 135. A general education course in social science or in family life education.

*** 150. Home Management** (3) I, II

A general education course in family life education. Integration of the learning activity around a living situation with emphasis on cooperation and establishment of family goals. Management for more successful use of the resources of time, energy, and money to enrich personal and family life; use of credit, value of insurance and balancing budgets. Open to men and women.

**160A. Merchandise Analysis—Textiles** (2) I

Properties, uses, selection and care of textile fibers and fabrics. The aim is to develop judgment in the evaluation involved in the selection of textiles. (Open to men and women.)

**160B. Merchandise Analysis—Nontextiles** (2) II

Properties, uses, selection and care of metals, glass, rubber, fur, enamels and plastics. (Open to men and women.)

**161. General Textiles** (2) II

Factors involved in fundamental weaves, fabrics, color, and finishes with reference to selection of fabrics for home decoration and clothing. Relationships to durability and cost are emphasized. Open to all students except merchandising majors.

*** 170. Child Care and Development** (3) I

A general education course in family life education. A study of the prenatal and preschool periods of child development; particular emphasis is given to the nutrition and physical development of the young child. Directed observation and participation in the child study laboratory.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## INDUSTRIAL ARTS

### IN THE DIVISION OF PHYSICAL SCIENCES

Courses in industrial arts lead to the following objectives: (1) a major or minor in arts and sciences; (2) a teaching major or minor for several of the teaching credentials; and (3) general education and individual interests. Many of the courses will prove valuable to students desiring practical shop experience on an elective basis.

### Major

A *major in arts and sciences* is offered in *industrial arts.* Requirements in the major are in addition to the 45 units required in general education courses. A minor field is not required.

Specific requirements for the major: Lower division: select five courses from the following: Industrial Arts 21, 31, 51, 61, 71, and 81 (15 units). Art 6A is a prerequisite for certain upper division courses. (Art 6A may be counted toward general education requirements in the area of Literature, Philosophy, and the Arts.) Upper division: A minimum of 25 upper division units to include 10 units in *each* of two of the following areas: industrial drawing, general metalworking, general woodworking, electricity and radio, transportation, or graphic arts; and five units selected from the areas just mentioned, or from handicraft courses, photography courses, or the general shop sequence.

### Minor

A *minor in arts and sciences* is offered in industrial arts. The minor consists of 15 to 22 units in industrial arts, nine units of which must be in courses carrying upper division credit.

A *teaching minor* in industrial arts is offered for the general junior high, special secondary, general elementary, and kindergarten-primary credentials.

## Preparation for Teaching Credentials in Industrial Arts

Although teaching credentials in industrial arts are not currently offered by th College, students planning to complete a teaching major in industrial arts for th special secondary or general secondary credential should follow the major outline above. Students who are admitted to the teacher training program must complete th following professional education courses: Education 184A-184B-184C, 116, 100B-IA and Health Education 151 (22 units). Students planning to enter teacher training ar urged to complete a teaching minor in the undergraduate program. For further information on teaching credentials in industrial arts, consult the Chairman of th Department of Industrial Arts.

### Lower Division Courses

***5. General Education Shop (3) II**

A general education course in practical arts utilizing the tools and materials of the general shop area. Shop activities include individual projects, field trips, and audio-visual materials.

***6. General Education Shop (3) I**

A general education course in practical arts utilizing the tools and materials of the general metalworking area. Shop activities include individual projects, field trips, and audio-visual materials.

**21. Industrial Drawing (3) I, II**

Development of the skills of industrial drawing. Experience in sketching, architectural drafting, mechanical drawing, sheetmetal layout, design, planning, blackboard drawing, mapping and other forms of graphic presentation.

**31. General Metalworking (3) I, II**

Development of the skills of general metal working. Experience in machine shop practice, welding, bench metal, art metal, forge, foundry, and sheetmetal.

**51. General Woodworking (3) I, II**

Development of the skills of general woodworking. Experience in cabinetmaking, woodturning, patternmaking, carpentry, boatbuilding, and finishing.

**61. Electricity and Radio (3) I, II**

Development of the skills for and the understandings of the electricity and radio area. Experience with electrical and radio principles and their application.

**71. Transportation (3) I, II**

Development of the skills of transportation machinery maintenance. Experience in the maintenance of equipment for land, sea and air transportation and an understanding of the mechanical principles involved.

**81. Graphic Arts (3) I, II**

Development of the skills of graphic arts. Experience in hand composition, press work, and other activities such as bookbinding, photography, silk screen, relief and intaglio printing and other duplicating processes. An understanding of the composition of papers and inks.

***85. Introduction to Photography (3) I, II**

A consideration of photographic optics and chemistry; nature of light and image formation; photographic emulsions, exposure and development. Composition and lighting. Two lectures and one three-hour laboratory per week. May be counted toward general education requirements under practical arts, unless used as part of the major in industrial arts.

### Upper Division Courses

**101. Handicrafts for Teachers (2) I, II**

For industrial arts or recreational students who desire to teach handicrafts. Skills in handicrafts are emphasized and directed toward the instructional process. Prerequisites: permission of the instructor and some previous shop experience.

**102. Materials and Techniques for Teaching Handicrafts** (3) I, II
More advanced techniques of handicrafts. Development of audio-visual aids, projects, and resource material for handicrafts. Physical setting, organization, and other pertinent problems. A course of instruction is prepared. Prerequisite: Industrial Arts 101.

**111. General Shop for Teachers** (2) I, II
For industrial arts students who desire to teach general shop. Skill in the general shop is emphasized and directed toward the instructional process. Prerequisites: permission of the instructor and some previous shop experience.

**112. Materials and Techniques for Teaching General Shop** (3) I, II
More advanced techniques for the general shop. Development of audio-visual aids, projects, and resource material for teaching general shop. Physical setting, organization, and other pertinent problems. A course of instruction is prepared. Prerequisite: Industrial Arts 111.

**121. Industrial Drawing** (3) I, II
Further experience in sketching, architectural drafting, mechanical drawing, sheetmetal layout, design, planning, blackboard drawing, mapping, and other forms of graphic presentation. A high level of performance is expected. Prerequisite: Industrial Arts 21.

**122A-122B. Industrial Drawing for Teachers** (2-2) I, II
For industrial arts students who desire to teach industrial drawing. Advanced skills are developed and directed toward the instructional process. In 122A, emphasis is placed on the junior high school program (7th, 8th, 9th grades). In 122B, emphasis is placed on the senior high school program. Prerequisites: Industrial Arts 121 and Art 6A. Industrial Arts 122A is prerequisite for 122B.

**123. Materials and Techniques for Teaching Industrial Drawing** (3) I, II
More advanced techniques of industrial drawing. Development of audio-visual aids, projects, and resource material for industrial drawing. Physical setting, organization, and other pertinent problems. A course of instruction is prepared. Prerequisites: Industrial Arts 122B and Education 184A.

**131. General Metalworking** (3) I, II
Further experience in machine shop practice, welding, bench metal, art metal, forge, foundry, and sheetmetal. A high level of performance is expected. Prerequisite: Industrial Arts 31.

**132A-132B. General Metalworking for Teachers** (2-2) I, II
For industrial arts students who desire to teach metalworking. Advanced skills are developed and directed toward the instructional process. In 132A, emphasis is placed on the junior high school program (7th, 8th, 9th grades). In 132B, emphasis is placed on the senior high school program. Prerequisites: Industrial Arts 131 and Art 6A. Industrial Arts 132A is prerequisite for 132B.

**133. Materials and Techniques for Teaching General Metalworking** (3) I, II
More advanced techniques of metalworking. Development of audio-visual aids, projects and resource material for metalworking. Physical setting, organization and other pertinent problems. A course of instruction is prepared. Prerequisites: Industrial Arts 132B and Education 184A.

**151. General Woodworking** (3) I, II
Further experience in cabinetmaking, woodturning, patternmaking, carpentry, boatbuilding, and finishing. A high level of performance is expected. Prerequisite: Industrial Arts 51.

**152A-152B. General Woodworking for Teachers** (2-2) I, II
For industrial arts students who desire to teach woodworking. Advanced skills are developed and directed toward the instructional process. In 152A, emphasis is placed on the junior high school program (7th, 8th, 9th grades). In 152B, emphasis is placed on the senior high school program. Prerequisites: Industrial Arts 151 and Art 6A. Industrial Arts 152A is prerequisite for 152B.

**153. Materials and Techniques for Teaching General Woodworking** (3) I, II

More advanced techniques of woodworking. Development of audio-visual aids projects, and resource material for woodworking. Physical setting, organization, and other pertinent problems. A course of instruction is prepared. Prerequisites: Industrial Arts 152B and Education 184A.

**161. Electricity and Radio** (3) I, II

Further experience with electrical and radio principles and their applications A high level of performance is expected. Prerequisite: Industrial Arts 61.

**162A-162B. Electricity and Radio for Teachers** (2-2) I, II

For industrial arts students who desire to teach electricity and radio. Advanced skills and understandings are developed and directed toward the instructional process. In 162A, emphasis is placed on the junior high school program (7th, 8th, 9th grades). In 162B, emphasis is placed on the senior high school program. Prerequisites: Industrial Arts 161 and Art 6A. Industrial Arts 162A is prerequisite for 162B.

**163. Materials and Techniques for Teaching Electricity and Radio** (3) I, II

More advanced techniques for electricity and radio. Development of audio-visual aids, projects, and resource material for electricity and radio. Physical setting, organization, and other pertinent problems. A course of instruction is prepared. Prerequisites: Industrial Arts 162B and Education 184A.

**171. Transportation** (3) I, II

Further experience in the maintenance of equipment for land, sea, and air transportation, and development of an understanding of the mechanical principles involved. A high level of performance is expected. Prerequisite: Industrial Arts 71.

**172A-172B. Transportation for Teachers** (2-2) I, II

For industrial arts students who desire to teach transportation machinery maintenance. Advanced skills are developed and directed toward the instructional process. In 172A, emphasis is placed on the junior high school program (7th, 8th, 9th grades). In 172B, emphasis is placed on the senior high school program. Prerequisites: Industrial Arts 171 and Art 6A. Industrial Arts 172A is prerequisite for 172B.

**173. Materials and Techniques for Teaching Transportation** (3) I, II

More advanced techniques of transportation machinery maintenance. Development of audio-visual aids, projects, and resource material for transportation. Physical setting, organization, and other pertinent problems are discussed. A course of instruction is prepared. Prerequisites: Industrial Arts 172B and Education 184A.

**181. Graphic Arts** (3) I, II

Further experience in hand composition, press work, and other activities such as bookbinding, photography, silk screen, relief and intaglio printing, and other duplicating processes. A high level of performance is expected. Prerequisite: Industrial Arts 81.

**182A-182B. Graphic Arts for Teachers** (2-2) I, II

For industrial arts students who desire to teach graphic arts. Advanced skills are developed and directed toward the instructional process. In 182A, emphasis is placed on the junior high school program (7th, 8th, 9th grades). In 182B, emphasis is placed on the senior high school program. Prerequisites: Industrial Arts 181 and Art 6A. Industrial Arts 182A is prerequisite for 182B.

**183. Materials and Techniques for Teaching Graphic Arts** (3) I, II

More advanced techniques of graphic arts. Development of audio-visual aids, projects, and resources material for graphic arts. Physical setting, organization, and other pertinent problems. A course of instruction is prepared. Prerequisites: Industrial Arts 182B and Education 184A.

**185. Photography for Teachers** (3) I

Designed for more mature students to learn photographic skills useful in teaching.

**186. Advanced Photography** (3) II

A consideration of advanced negative control, projection printing techniques, composition and editorial content, architectural and illustrative photography, and flood photoflash techniques. Two lectures and three hours of laboratory per week. Prerequisite: Industrial Arts 85 or equivalent.

**190. Experimental Shop** (1 or 2) I, II
Individual shop work on complex projects on an experimental basis. Prerequisite: Permission of the instructor. May be repeated with permission of the instructor.

**193. Industrial Arts Organization and Management** (2) II
Study of the organization of Industrial Arts in secondary schools, review of project requirements and methods of developing student participation in shop management. Two lectures per week.

**194. Recent Trends in Industrial Arts Education** (2) I
Survey of current trends and practices in the field of Industrial Arts in Secondary Education. There will be opportunity for individual work on related problems of interest to member of the class. Two lectures per week.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## JOURNALISM

### IN THE DIVISION OF LANGUAGES AND LITERATURE

### Major

A *major in arts and sciences* is offered in *journalism* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division: Required in the major: Journalism 50, 51A-51B, Business 2A (or equivalent performance in typing), and Speech Arts 81. Required in general education: Physical Science 10. Recommended: Business 27, Economics 1A-1B, English 20 or General Language 20, English 61. Upper division requirements: 24 upper division units in journalism to include Journalism 102 and 151. A minor is not required.

### Minor

A *minor in arts and sciences* is offered in journalism. The minor consists of 15 to 22 units in journalism, nine units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in journalism.

### Lower Division Courses

**50. News and Feature Photography** (2) II
An elementary course designed primarily for students of journalism and public relations; experience with professional photographic equipment and film processing; contact and projection printing; emphasis on composition and news value of pictures. One hour lecture and three hours laboratory.

**51A. Elements of Journalism** (3) I
Theory of news writing; introduction to the newspaper as an institution in modern society. Prerequisites: Sophomore standing and grade of B in freshman composition, or consent of instructor; and Business 2A (may be taken concurrently) or equivalent, with 30-word-per-minute performance.

**51B. News Gathering and Reporting** (3) II
Practice in writing news copy, both for class criticism and for publication in *The Aztec*. Prerequisite: Grade of C or better in Journalism 51A.

**92. Special Projects** (1-3) I, II
Special work in journalism by arrangement with instructor. Work on *The Aztec*, yearbook, other publications, with consent of instructor. Laboratory periods required. Total credit that may be earned in Special Project work limited to eight units.

### Upper Division Courses

**101. Interpretative Writing** (3) II
Practice in gathering material and writing articles for specialized areas, with emphasis on the business press. Production of eight articles and marketing of at least one article required. Prerequisite: junior standing and permission of instructor.

**102. Law of the Press** (3) II

Understanding of the law as it affects the privileges and defines the duties and responsibilities of the press. Problems of constitutional law, libel, privacy, and postal regulations pertinent to the press, with emphasis on the covering of public affairs.

**103. Picture Editing** (1) II

Editorial problems of newspaper and magazine illustration; picture selection, cropping, captioning, layout; the picture story; use of charts, diagrams, cartoons, maps; picture sources. Students will receive credit for work on the student publications.

**106. Creative Writing** (3) I

A writing workshop in which students are given opportunity to criticize each other's work. Emphasis on narrative and description, but freedom to pursue whatever writing forms may interest the student most. May be taken a second time with new material. Not open to students with credit for English 106.

**122. Public Opinion Measurement** (3) II

The history, methods, and problems of public opinion and attitude measurement. Emphasis will be placed upon the polling of consumers and voters. Students will be given field experience. Not open to students with credit for Psychology 122.

**132. Propaganda and Public Opinion** (3) II

A study of the forces which mold the American public mind, the practice of propaganda, a description and analysis of public relations, pressure groups and their effect in American public life. Not open to students with credit for Political Science 122.

**142. State Government** (3) II

A study of the political structure and its operation used in the carrying on of the functions exercised by the states; state-federal relations; state-local government relations; particular emphasis on California government. This course meets the graduation requirement in California state and local government. Not open to students with credit for Political Science 142.

**143. Municipal and County Government** (3) I

A study of the organization and its operation used to carry into effect the functions assigned to local governmental units; particular emphasis upon local government in California. This course meets the graduation requirement in California state and local government. Not open to students with credit for Political Science 143.

**151. Advanced Editing and Reporting Techniques** (3) I

Editing copy, writing headlines, making up pages, handling telegraph copy. Practice in specialized forms of journalistic writing. Laboratory periods required. Prerequisite: Journalism 51A-51B.

**152. High School Journalism** (3) II

Methods of conducting high school journalism classes. Editorial, business and mechanical aspects of school publication work, with emphasis on copy editing, headline writing and layout. Not open to journalism majors. Prerequisite: grade of C or better in Journalism 51A and approval of instructor.

**162. Magazine Fiction** (3) I

Coaching in constructing and writing short stories for commercial publications. Admission with consent of instructor. Not open to students with credit for English 162.

**166. Honors Course** (Credit to be arranged) I, II

Special study open to members of the Honors Program in journalism. Refer to the Honors Program.

**180. Public Relations** (3) I

Principles, methods, and objectives in the field of public relations; evaluation of the "publics" of institutions and industry; case studies of public relations problems. Prerequisites: Journalism 51A-51B, or permission of the instructor. Not open to students with credit for Business 180.

**3. Radio Continuity and News Writing** (3) II
Correlates news editing and writing with announcing styles. Radio news pro-
dure and organization of a radio news staff; analysis of repertorial and commentary
yles. Includes production techniques of "on-the-spot" and multiple point pickup
oadcasts. Registration with consent of the instructor. Not open to students with
edit for Speech Arts 183.

**5. Advertising Copy and Layout** (2) I
Introduction to principles and techniques of copy writing; types of copy; prepa-
ation of layouts; mechanical methods employed by the artist, engraver and printer;
gislation and regulations affecting advertising claims. Prerequisite: Business 27, or
nsent of instructor. Not open to students with credit for Business 185.

**1A-191B. Applied Journalism** (1-3) (1-3) I, II
A special course in which students work in the San Diego area on magazines,
ty and county newspapers, and on public relations, publicity, and advertising staffs
local, civic and business groups. Prerequisites: Journalism 51A-51B and permission
instructor.

**2. Special Projects** (1-3) I, II
Special work in journalism by arrangement with instructor. Work on *The Aztec*,
earbook and other publications, with consent of instructor. Laboratory periods re-
uired. Total credit that may be earned in Special Project work limited to eight units.

**9. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of in-
ructor.

## LANGUAGE ARTS

### IN THE DIVISION OF LANGUAGES AND LITERATURE

#### Major

A *language arts major in arts and sciences* is offered for the A.B. degree to
udents who have been admitted to the general secondary credential program in
acher education and provided that a minimum of eight units in professional education
urses be completed by date of degree candidacy. Requirements for the major are in
ddition to 45 units in general education courses. A minor selected from an appropriate
aching minor for the general secondary credential is required of students taking this
ajor. A minimum of 15 units in this minor, six units of which must be in upper
ivision courses, must be completed for the A.B. degree. The additional units required
r the credential may be completed either in undergraduate or postgraduate work.

Lower division requirements for the major: Six units selected from English
0A-50B, or 52A-52B, or 60A-60B (or two upper division courses may be substituted,
election to be made from English 116A-116B, or 118A-118B, or 119A-119B, or 120A-
20B, or 126A-126B, or 143A-143B); Journalism 51A; Speech Arts 60A, or 60B, or
5A, or 55B; Speech Arts 81. Upper division requirements: 27 units to include the
ollowing courses: English 192; English 106 or 191; English 131, or 132, or 133, or
34; English 117A, or 117B, or 152A, or 152B; Journalism 152; Speech Arts 108,
59, and 176; Speech Arts 191, or 192A, or 192B. If lower division English sequence
taken in American Literature, the upper division course work in literature should
e taken in other areas.

A *teaching major in language arts* is offered for the general secondary school
redential. For a statement of requirements, refer to this credential.

*Minor* work is not offered in language arts.

## LATIN

### IN THE DIVISION OF LANGUAGES AND LITERATURE

*Major* or *minor* work is not offered in Latin.

#### Lower Division Courses

**1. Elementary** (3) I, II (Not offered in 1953-54)
Study of the Latin language and Roman culture, with reading of selected prose
assages.

***2. Elementary** (3) I, II (Not offered in 1953-54)
Continuation of Latin 1. Prerequisite: Latin 1 or one year of high school Lati

***3. Intermediate** (3) I (Not offered in 1953-54)
Reading of selected passages emphasizing the contribution of the ancient cultu to our own. Prerequisite: Latin 2 or two years of high school Latin.

***4. Intermediate** (3) II (Not offered in 1953-54)
Continuation of Latin 3. Prerequisite: Latin 3 or three years of high scho Latin.

## LIBRARY SCIENCE

### IN THE DIVISION OF SOCIAL SCIENCES

*Major* or *minor* work is not offered in library science.

### Lower Division Courses

***10. Use of the Library** (2) I, II
The chief object is to give a working knowledge of some of the resources of th library which every teacher and student should understand—the decimal classific tion, the card catalog, periodical indexes, and the most important reference book together with some instruction in the preparation of bibliographies. The course wi be a requirement of those students added to the library's staff of student assistant although it will not prepare the student to become a librarian. A general educatio course in practical arts.

## LIFE SCIENCE

### IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in *life science* for the A.B. degree. Course in the major are in addition to 45 units in general education courses. Lower divisio requirements: Zoology 1A-1B or Biology 3 and 4; Zoology 20 or Physiology 1A Botany 2A-2B or 1 or Bacteriology 1; Chemistry 1A-1B or 2A-2B; Physics 2A-2B Upper division requirements: A minimum of 24 upper division units in zoology bacteriology and botany of which six units may be from a related field. The plan fo this major must be with the approval of the Chairman of the Division of Life Sciences A minor is not required of students majoring in life science.

A *major in arts and sciences* is offered in *life science* for the B.S. degree. Course in the major are in addition to 45 units in general education courses. Lower divisio requirements: Bacteriology 1 or 101, Botany 2A-2B, Zoology 1A-1B, Chemistr 1A-1B or 2A-2B, Physics 2A-2B. Upper division requirements: 36 upper divisio units in zoology, bacteriology and botany or 27 units in these fields with nine unit in a related field. The plan for this major must be with the approval of the Chairma of the Division of Life Sciences. A minor is not required of students majoring in lif science.

Note: Twelve units in natural science courses in the major for the A.B. o B.S. degree may be applied toward requirements in general education natural scienc courses.

A *teaching major in life science and general science* is offered for the genera secondary school credential and a *teaching major in general science* is offered for th general junior high school credential. For statement of requirements, refer to thes credentials.

### Minor

A *minor in arts and sciences* is offered in *life science*. The minor consists of 15 t 22 units in life science to include Biology 3 and 4, or the equivalent, and a minimum o nine units in courses carrying upper division credit selected with approval of th chairman of the division.

A *teaching minor in life science and general science* is offered for the genera secondary, special secondary, general elementary, and kindergarten-primary credentials For statement of requirements, refer to these credentials.

# MATHEMATICS

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in *mathematics* for the A.B. degree. Courses the major are in addition to 45 units in general education courses. Lower division equirements: Mathematics 1, or equivalent (unless exempted by examination); Mathmatics 3A-3B and 4A. Recommended: Business 2, Engineering 1A, 21; Physics A-4B or Physics 2A-2B, 3A-3B. A reading knowledge of French or German is desirble. Upper division requirements: A minimum of 24 upper division units in matheatics to include Mathematics 117 (unless taken as Mathematics 4B in the lower ivision); 111, 119, 121, and either 105 or 106. Six units of the remaining nine units ay be selected from upper division courses in related areas with the approval of the epartment. A minor is not required, but is recommended.

A *teaching major* is offered in mathematics for the general junior high school redential and for the general secondary credential. For specific information, refer to e outline of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in *mathematics*. The minor consists of 5 to 22 units in mathematics, six units of which must be in courses carrying upper ivision credit. Courses should be selected in consultation with the departmental epresentative.

A *teaching minor* is offered in mathematics for the general secondary, the special econdary, the general elementary, and the kindergarten-primary credentials. For pecific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**Basic Mathematics** (3) I, II

Fundamentals of mathematics with applications to everyday problems. Required f all students failing the competency examination in mathematics. Not open for credit students passing this examination. May not be used in the major or minor.

**Elementary Algebra** (3) I, II

Fundamentals of algebra. Not open for credit to students who have credit for one ear of high school algebra.

**B. Plane Geometry** (3) I, II

Fundamentals of plane geometry. Not open for credit to students who have credit or one year of high school geometry. May be counted toward general education in athematics.

**Intermediate Algebra** (3) I, II

An extensive review of elementary algebra followed by quadratic equations, imultaneous equations, ratio and proportion, variation, progressions, etc. Prerequiite: Elementary algebra and geometry or Mathematics A-B. Not open for credit to tudents who have completed two years of high school algebra.

**Trigonometry** (3) I, II

Plane trigonometry with special attention to logarithms and those aspects needed n analytic geometry and the calculus. Prerequisite: Mathematics C or its equivalent. ot open for credit to students who have completed one year of high school trigoometry.

**Solid Geometry** (2) II

Properties of lines and planes. Calculation of areas and volumes. Prerequisite: athematics C or its equivalent. Not open for credit to students who have completed ne year of solid geometry in high school.

**G. Mathematics for General Education** (3) I, II

Basic concepts of arithmetic, algebra, and geometry with applications. Recomended for students whose scores on the competency examination, while exempting hem from Mathematics X, indicate a need for further training in mathematics. A eneral education course in mathematics. May not be used in the major or minor.

**S. Slide Rule (1) I, II**
Theory and use of the slide rule. Practice in performing the fundamental operations of arithmetic. Some attention is given to more involved computations. Prerequ site: Trigonometry or Mathematics A-B or equivalents.

**1. Algebra and Trigonometry (3) II**
Review of algebra and trigonometry. Further study of identities, graphs, solution of algebraic and trigonometric equations, determinants, and mathematical proofs Prerequisite: Two years of high school algebra and trigonometry.

**3A. Analytic Geometry (3) I, II**
Equations and loci, conic sections, coordinate transformations, Cartesian an polar coordinates, and parametric representation. Prerequisite: Mathematics 1; o trigonometry and passing of qualifying examination. (Qualifying examination will b given prior to registration.)

**3B. First Course in Calculus (3) I, II**
Introduction to differential and integral calculus with applications. Prerequisite Mathematics 3A, with a grade of C or better.

**4A. Second Course in Calculus (3) I, II**
Differentiation, integration, infinite series, and applications. Prerequisite Mathematics 3B, with a grade of C or better.

**4B. Third Course in Calculus (3) I, II**
Partial differentiation, successive integration and applications. Prerequisite Mathematics 4A, with a grade of C or better. (Solid geometry is recommended.) No open to students with credit for Math. 117.

***7A. Mathematical Analysis (3) I**
Designed for students who do not intend to prepare for a professional career i physical science or in engineering. Consideration is given to the processes and applications of algebra and trigonometry. Prerequisite: High school algebra and plane geom erty. Students with credit for Mathematics 1 will not receive credit for Mathematic 7A. This course may be counted toward general education in mathematics.

***7B. Mathematical Analysis (3) II**
A continuation of Mathematics 7A including the concepts and applications o analytic geometry and an introduction to the calculus. Prerequisite: Mathematics 7A Students with credit for Mathematics 3B will not receive credit for Mathematics 7B This course may be counted toward general education in mathematics.

### Upper Division Courses

***104. History of Mathematics (3) II**
History of mathematics down to early modern times. This course may be counted toward general education in mathematics.

**105. College Geometry (3) I**
A synthetic treatment of the points and lines associated with triangles and quadrilaterals, similarity, inversion, ruler and compass construction, etc. Highly recommended for all teachers of high school geometry. Prerequisite: Mathematics 3B or 7B.

**106. Projective Geometry (3) I**
Concurrence of lines, collinearity of points and other properties of figures not altered by projections; construction and study of ellipses, hyperbolas, and parabolas by means of projections. Prerequisites: Mathematics 3B or 7B and permission of instructor.

**111. Theory of Algebraic Equations (3) I, II**
Determinants, complex numbers, and theory of algebraic equations. Prerequisite: Mathematics 3B or 7B.

**112. Analytic Geometry of Space (3) II**
The coordinate systems in space; lines, planes, and quadric surfaces; applications. Prerequisite: Mathematics 4A.

**17. Intermediate Calculus** (3) I, II
Essentially the same as Mathematics 4B. Additional special work for advanced udents may be assigned. Prerequisite: Mathematics 4A, with a grade of C or better. ot open for credit to students with credit for Math. 4B.

**18A. Advanced Mathematics for Engineering Students** (3) I
Introduction to differential equations, vector analysis, Fourier series, hyperbolic, lliptic, and Bessel functions. Prerequisite: Mathematics 117 or its equivalent.

**18B. Advanced Mathematics for Engineering Students** (3) I
Introduction to partial differentiation, partial differential equations, line and urface integrals, complex variables, etc. Prerequisite: Mathematics 118A.

**19. Differential Equations** (3) I, II
Ordinary differential equations with applications to geometry, physics, and chemtry. Prerequisite: Mathematics 117 or its equivalent.

**21. Advanced Calculus** (3) II
Review of the fundamental concepts of the calculus, partial differentiation, series, ne and surface integrals, etc. Prerequisite: Mathematics 118A or Mathematics 119.

**24. Vector Analysis** (3) I
Vector algebra, differentiation of vectors, gradient, divergence, and curl. Applicaons to geometry and physics. Prerequisite: Mathematics 4B or 117.

**40A. Mathematical Statistics** (3) I
Graphical and arithmetical characterization of observed frequency distributions, oments, use of normal curve, curve fitting, correlation, etc. Prerequisite: Matheatics 4B or 117.

**40B. Mathematical Statistics** (3) II
Theoretical discrete and continuous distributions, multiple and partial correlaion, large and small sample theory including student's T, Chi-square, and the F distriutions with applications. Prerequisite: Mathematics 140A.

**66. Honors Course** (Credit to be arranged) I, II Refer to the Honors Program.

**99. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of nstructor.

## Graduate Courses

**01. Concepts of Geometry From an Advanced Viewpoint** (2) I
An introduction to the fundamental concepts of geometry and the processes of athematical thinking in this area. Recommended for candidates for the general econdary credential. Prerequisite: One upper division course in geometry.

**02. Concepts of Algebra From an Advanced Viewpoint** (2) II
An introduction to the fundamental concepts of algebra and the processes of athematical thinking in this area. Recommended for candidates for the general econdary credential. Prerequisite: One upper division course in algebra.

**04. Advanced Work in the History of Mathematics** (2) I
Intensive study of specific phases of the history of mathematics with attention o implications for teaching mathematics. Prerequisite: Mathematics 104.

**24. Functions of a Complex Variable** (3) I
Operations on complex numbers, limits, convergence, continuity, differentiation, ntegration, Cauchy's Theorem, power series, elementary functions, etc. Prerequisite: athematics 118A or 119 and consent of the instructor.

**90. Bibliography** (1) I, II
Exercises in the use of basic reference books, journals, and specialized biblioraphies, preparatory to the writing of a master's project or thesis.

**98. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of nstructor.

**99. Thesis or Project** (3) I, II
Guidance in the preparation of a project or thesis for the master's degree.

# MUSIC

## IN THE DIVISION OF FINE ARTS

### Major

A *major in arts and sciences* is offered in *music* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses, except that nine units of music activity courses may be counted toward general education requirements in the area of literature, philosophy, and the arts. Students majoring in music are not required to complete a minor. Several plans of study are available with varying degrees of emphasis on performance, history and literature, creative activity, and teaching.

The music curricula are designed to fulfill the needs of all students: (1) Those who have professional ambitions in musical performance, or seek a foundation for graduate study leading to college or university teaching, (2) those who are preparing for one of the several state teaching credentials with music as either a major or minor (3) those whose major professional interest is in another department and are seeking musical study as a minor, and (4) those who are interested in music as an elective study area for the enrichment of their cultural background.

## GENERAL BASIC REQUIREMENTS

General basic requirements for the A.B. degree with a major in music (not the credential) are as follows:

1. Demonstration of proficiency in vocal or instrumental *performance* comparable to a level of difficulty of the Bach two-part inventions or the easier Haydn sonatas for the piano before admission to the major may be granted.
2. Selection of a major instrument or of voice before admission to the major program and demonstration of *performance ability* developed through class or individual instruction after admission to the program.
3. Appearance as a soloist in at least one student recital during each semester in residence, after completion of two semesters of college work.
4. Competence in elementary keyboard technique (the student's attention is directed to the prerequisites for certain courses and to the Music 10A-B-C-D requirement).
5. As laboratory experience participation in at least one activity each semester. (Students planning to enter the teacher training program are referred to the activity requirements for the Special Secondary Credential in Music listed in the section of the catalog under Professional Curricula in Teacher Education.)

## SPECIFIC REQUIREMENTS FOR THE MUSIC MAJOR

### (Not the teaching credential)

Music majors must complete the specific requirements listed below and in addition complete the requirements in one of the following fields of emphasis: (1) Performance, (2) Music History and Literature, (3) Creative Activity. Students desiring the Special Secondary Credential in Music should refer to this credential for specific requirements. Students are required to consult with the chairman of the Department of Music for selection of the field of emphasis.

Specific requirements for all majors (except for the Special Secondary Credential): Lower division: Music 9A-9B, 10A-10B-10C-10D (may be omitted in part or in full upon evidence of satisfactory piano technique); 52A-52B, 59A-59B; and six units of music activity courses selected from courses numbered 70 to 87. (Total: 28 lower division units.) Students electing performance as the field of emphasis must complete four additional lower division units from courses in their major instrument.

Upper division requirements: Music 107, 109A, 146A-146B-146C; four units selected from 102A-102B, 103A-103B; five units of music activity courses selected from courses numbered 170 to 187 (see activity requirement above); four units of the major instrument courses selected from 111, 112, 116, 117, 121, 122, 126, 127, 131, 132, or 150A-150B-150C-150D; and the additional upper division requirements in one of the following fields of emphasis: (Total: 25-27 units).

*Performance:* Four units selected from Music 109B and 199. Students emphasizing performance must appear in a joint public recital during the junior year and must present an entire solo public recital during the senior year. The student must pass a preliminary audition of the compositions to be performed at the public recital before the music faculty during the semester preceding the recital appearance.

*Music History and Literature:* Six units selected from Music 109B and 199. uring his senior year, the student emphasizing history and literature is required to ·ganize, prepare program notes and present two recitals consisting of recorded or ive" performances each of which will deal with representative works of a certain eriod or composer or with certain periods, composers, works or styles to be compared; ich students must pass a preliminary audition of the material to be presented before ie music faculty at least one month in advance of each performance.

*Creative Activity and Composition:* Six units selected from Music 109B and 199. he student emphasizing creative activity and composition is required to present a ncert of his compositions during the senior year and present the scores of works to performed to the music faculty one month in advance of the performance.

### Minor

A ***minor in arts and sciences*** **is offered in** ***music.*** **General basic requirements for** e minor are as follows: (1) Demonstration of vocal or instrumental performing ility before admission to the minor program may be granted; (2) as laboratory perience participation in one music activity each semester for seven semesters. (In ecial cases this requirement may be waived by the chairman of the Music Depart- ent.) Lower division: Music 9A, 10A-10B-10C-10D; six units selected from 9B, A-52B, and 59A; and four units of music activity courses selected from courses umbered 70 to 87. Upper division: Six units selected from Music 102A-102B and 3A-103B; and three units of music activity courses selected from courses numbered 0 to 187.

## THE SPECIAL SECONDARY CREDENTIAL IN MUSIC

**A** ***teaching major in music*** **is offered for the special secondary credential and r the general secondary credential. For statement of requirements, refer to these edentials.**

## ELECTIVES IN MUSIC

**The Music Department offers certain courses which fulfill the needs of students ho do not have music as a major or minor subject but who are interested in music an elective study area for the enrichment of their cultural background. Courses articularly suited to these needs are Aesthetics 2 and 102 and the music courses umbered 70 to 88 and from 170 to 188; such courses are designated as general edu- tion courses and may be taken as partial fulfillment of the Literature, Philosophy, nd the Arts requirement in general education.**

**Some students will be musically prepared to elect courses in music which may may not be included in the general education group. Enrollment by qualified stu- ents who wish to elect these courses is encouraged.**

### Lower Division Courses

**. Music Fundamentals** (3) I, II

Basic sight singing, keyboard playing, writing and aural recognition of scales, tervals, triads, and basic rhythms. Students lacking keyboard facility must enroll ncurrently for piano study. Designed for students not qualified to enter Music 9A. ot counted as part of the music major or minor. (Formerly Music 8A.)

**7A. Musicianship—For General Elementary Teachers** (3) I, II

**Elementary music theory and skills including notation, meter, rhythm, scales,** tervals, triads, sight singing, ear training, dictation, elementary keyboard facility **nd other rudiments. State adopted elementary music texts used. A general elementary** edential requirement. Open only to candidates for the general elementary credential.

**3. Music Materials for the Elementary School** (3) I, II

**Study of all phases of elementary school music: Singing, listening, reading, eative music, instruments, repertoire of songs and records, music projects. Required all general elementary credential candidates. Prerequisite: Music 7A or consent instructor.**

**A. Elementary Harmony** (3) I, II

Diatonic usage studied through written exercises, keyboard harmony, analysis, ctation, and sight singing. Prerequisites: demonstrated competency in music funda- entals, or Music X; ability to play Bach chorales at the keyboard. (Formerly usic 8B.)

**9B. Intermediate Harmony and Two-part Counterpart** (3) I, II

Continuation of Music 9A including simple harmonic alteration. Strict specie counterpoint in two parts. Prerequisite: Music 9A. (Formerly Music 58A.)

*** 10A-10B. Piano—Elementary Class Instruction** (1-1) I, II

Fundamental playing and reading techniques for the pianoforte. Emphasis upo playing by ear, and the development of interpretative ability. Music majors or minor are required to start these courses on admission unless competence of 10D level is dem onstrated.

**10C-10D. Piano—Elementary Class Instruction** (1-1) I, II

Continuation of Music 10A-10B.

**11ABCD. Piano—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactor audition before the instructor is required for admission.

**15A. Voice—Elementary Class Instruction** (1) I, II

A class for beginners in the vocal field taking up the problems of breath contro tone placement, articulation and enunciation. Frequent classroom performance o simple songs.

**15B. Class Voice—Continuation First Semester Voice** (1) I, II

Study of more advanced songs with attention being given to interpretation, a well as continued work on tone, articulation and placement. Frequent performanc before class required. Prerequisite: Music 15A or equivalent.

**16ABCD. Voice—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactor audition before the instructor is required for admission.

**20AB. Strings—Elementary Class Instruction** (1-1) I, II

Open to all students but primarily for those whose major instrument is not on of the stringed instruments and who are preparing for a teaching credential in music Not open to students with credit for Music 120A-120B.

**21ABCD. Strings—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission. Sections are offered in violin viola, cello, bass.

**25AB. Woodwinds—Elementary Class Instruction** (1-1) I, II

Open to all students but primarily for those whose major instrument is not on of the woodwind instruments and who are preparing for a teaching credential in music Not open to students with credit for Music 125A-125B.

**26ABCD. Woodwinds—Intermediate Class Instruction** .(1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission. Sections are offered in flute, oboe, clarinet, and bassoon.

**30AB. Brass—Elementary Class Instruction** (1-1) I, II

Open to all students but primarily for those whose major instrument is not one of the brass instruments and who are preparing for a teaching credential in music. Not open to students with credit for Music 130A-130B.

**31ABCD. Brass—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission. Sections are offered in horn, trumpet, trombone, tuba, and baritone.

**35. Percussion—Elementary Class Instruction** (1) I, II

Open to all students but primarily for those who are preparing for a teaching credential in music. Not open to students with credit for Music 135.

**ABCD. Intermediate Individual Study** (1-1-1-1) I, II

For the teaching credential performance requirement or for the requirements the major emphasis curricula leading to the A.B. degree with a major in music. e explanation below for conditions under which credit may be given for music udy under private instructors.

Piano
Organ
Voice
Flute
Oboe
Clarinet
Saxophone
Bassoon
French Horn
Trumpet
Trombone
Baritone Horn
Tuba
Percussion
Violin
Viola
Cello
Contrabass

**A-52B. History of Music** (3-3) Year, I

Detailed study of chronological development of musical art and forms from the iddle Ages to the present. Analytical score study and assigned recordings. Familiarity ith musicalogical resources through individual assignments. Prerequisite: Music X, equivalent, and permission of instructor. (Formerly Music 101A-101B.)

**. Opera Technique** (2) I, II

Training in the interpretation and characterization of light and grand opera. pecific work in coordination of operatic ensemble. Formerly Music 31.

**A. Advanced Harmony and Three-part Counterpoint** (3) II

Chromatic alteration with emphasis on analysis of 19th century chromatic usage d construction of examples in corresponding idioms. Strict species counterpoint in ree parts. Prerequisite: Music 9B. (Formerly Music 58B.)

**B. Twentieth Century Harmonic Practice and Four-part Counterpoint** (3) I

Study of harmonic usages and trends since Debussy. Strict species counterpoint four parts. Prerequisite: Music 59A. (Formerly Music 108A.)

## ACTIVITY COURSES

The activity courses are devoted to the study in detail and the public performance a wide range of representative literature for each type of ensemble and to provide udents with practical experience in rehearsal techniques.

**70A-70B. Chamber Music** (1-1) I, II

Sections for string, woodwind, brass, piano, and mixed ensemble groups. Perission of the instructor required.

**C-70D. Chamber Music** (1-1) I, II

Continuation of Music 70A-70B.

**A. Beginning Instrumental Ensemble** (½) I, II

Open to all instrumental students. Group performance of simple orchestral and nd scores. Prerequisite: Music 20A, 25A, 30A, or equivalents, one or more.

**B. Intermediate Instrumental Ensemble** (½) I, II

Group performance of orchestral and band scores of more advanced grade. aterials covered will prepare the student for minor parts in either the symphony rchestra or the symphony band. Prerequisites: Music 72A or equivalent.

**75ABCD. Symphony and Marching Band** (2-2-2-2) I, II

Permission of the instructor required.

**80ABCD. Symphony Orchestra** (1-1-1-1) I, II

Permission of the instructor required.

**85ABCD. Chorus** (1-1-1-1) I, II

Permission of the instructor required.

**86ABCD. Treble Clef** (1-1-1-1) I, II

Permission of the instructor required.

**87ABCD. Men's Glee Club** (1-1-1-1) I, II

Permission of the instructor required.

***88ABCD. Workshop Chorus** (½-½-½-½) I, II

Open to students who do not have music as a major or minor field and who a interested in singing standard choral works. No entrance examination required. D signed for nonmusic majors and minors.

## Upper Division Courses

(For description of courses in the field of music appreciation, see Aesthetics)

**102A. Chamber Music Literature** (2) I

Instrumental ensemble repertoire, including all ensemble combinations fro 16th to 20th centuries. Analysis by use of scores and recordings. Prerequisite: Mus 52A-52B.

**102B. Keyboard Literature** (2) II

Piano, organ, and other clavier literature from the 16th to 20th centurie Recordings, scores, and guest performers. Prerequisite: Music 52A-52B.

**103A. Symphonic Literature** (2) I

A study of the symphony and symphonic poem; the evolution of their growth an analysis with scores of the structure, harmonic content, and instrumentation c representative works of each period; an examination of their meaning and place in th history of music. Prerequisite: Music 52A-52B.

**103B. Song Literature** (2) II

Historical and musical development of the art song and of the folk song. Work of representative European and American composers in these media. Recordings an scores. Prerequisite: Music 52A-52B.

**106A. Counterpoint** (2) I

Study of the five species of counterpoint with much practice in writing in suc forms. Application of contrapuntal style to modern composition. Prerequisite Music 9B.

**106B. Counterpoint** (2) II

Species counterpoint in four parts. Analysis of contrapuntal usage in musica composition. Continuation of Music 106A. Prerequisite: Music 106A.

**107. Strict Composition** (3) II

Problems of composition in the shorter forms. Prerequisite: Music 59B. (Formerly Music 108B.)

**109A-109B. Instrumentation and Arranging** (2-2) Year, 1

Arranging of music for full orchestra. Selected works of students to be performed by standard orchestras. Prerequisites: Music 59B; 109A for 109B.

**111ABCD. Piano—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studies in detail. Satisfactory audition before the instructor is required for admission.

**112ABCD. Piano—Advanced Class Instruction** (1-1-1-1) I, II

Materials and techniques of the advanced level are studied in detail. Satisfactory audition before the instructor required for admission.

**116ABCD. Voice—Intermediate Class Instruction** (1-1-1-1) I, II

Materials and techniques of intermediate level are studied in detail. Satisfactory audition before the instructor is required for admission.

**117ABCD. Voice—Advanced Voice Instruction** (1-1-1-1) I, II

Materials and techniques of advanced level are studied in detail. Satisfactory audition before the instructor is required for admission.

**120A-120B. Strings—Elementary Class Instruction** (1-1) I, II

Open to all students but primarily for those whose major instrument is not one of the stringed instruments and who are preparing for a teaching credential in music. Not open to students with credit for Music 20A-20B.

**21ABCD. Strings—Intermediate Class Instruction** (1-1-1-1) I, II
Materials and techniques of intermediate level are studied in detail. Satisfacory audition before the instructor is required for admission. Sections are offered violin, viola, cello, and bass.

**22ABCD. Strings—Advanced Class Instruction** (1-1-1-1) I, II
Repertoire includes study of standard orchestral parts, solos, sonatas, suites and ncerti. Satisfactory auditions before the instructor are required for admission. Secons are offered in violin, viola, cello, and bass.

**25A-125B. Woodwinds—Elementary Class Instruction** (1-1) I, II
Open to all students but primarily for those whose major instrument is not one the woodwind instruments and who are preparing for a teaching credential in usic. Not open to students with credit for Music 25A-25B.

**26ABCD. Woodwinds—Intermediate Class Instruction** (1-1-1-1) I, II
Materials and techniques of intermediate level are studied in detail. Satisfacory audition before the instructor is required for admission. Sections are offered in ute, oboe, clarinet, and bassoon.

**27ABCD. Woodwinds—Advanced Class Instruction** (1-1-1-1) I, II
Repertoire includes study of standard orchestral parts, solos, sonatas, suites and oncerti. Satisfactory auditions before the instructor are required for admission. Secions are offered in flute, oboe, clarinet, and bassoon.

**30A-130B. Brass—Elementary Class Instruction** (1-1) I, II
Open to all students but primarily for those whose major instrument is not one f the brass instruments and who are preparing for a teaching credential in music. ot open to students with credit for Music 30A-30B.

**31ABCD. Brass—Intermediate Class Instruction** (1-1-1-1) I, II
Materials and techniques of intermediate level are studied in detail. Satisfacory audition before the instructor is required for admission. Sections are offered in orn, trumpet, trombone, tuba, and baritone.

**32ABCD. Brass—Advanced Class Instruction** (1-1-1-1) I, II
Repertoire includes study of standard orchestral parts, solos, sonatas, suites and oncerti. Satisfactory auditions before the instructor are required for admission. Secions are offered in horn, trumpet, trombone, tuba, and baritone.

**35. Percussion—Elementary Class Instruction** (1) I, II
Open to all students but primarily for those who are preparing for a teaching redential in music. Not open to students with credit for Music 35.

**41. Methods in Teaching Piano** (3) Summer
Teaching of beginning and intermediate piano. Survey of materials available or child and adult classes. Special consideration of the problems of the adult beginner. upervised teaching of beginning students in individual lessons and class groups.

**42. Survey of Harmony and Musical Form** (2) (Irregular)
A review of diatonic and chromatic harmony, modulation and musical form. The aterial covered will serve as refresher study for the Colleague Examination under he California Plan of the Music Teachers Association of California. Not open to usic majors or minors.

**46A. Fundamentals of Conducting** (1) I
Elements of baton technique and development of basic skills common to choral nd instrumental conducting.

**146B. Instrumental Conducting** (1) II
Study of orchestra and band scores of graduated levels of advancement. The lass will prepare and conduct instrumental works in public performances. Prerequisite: Music 146A.

**146C. Choral Conducting** (1) I
Representative literature and techniques for choral organizations will be studied and performed. Practical experience in typical conducting situations will be emphasized in various grade levels. Prerequisite: Music 146A.

**150ABCD. Advanced Individual Study** (1-1-1-1) I, II
For the teaching credential performance requirement or for the requiremen of the major emphasis curricula leading to the A.B. degree with a major in mus See explanation below for conditions under which credit may be given for music stu under private instructors.

- Piano
- Organ
- Voice
- Flute
- Oboe
- Clarinet
- Saxophone
- Bassoon
- French horn
- Trumpet
- Trombone
- Baritone horn
- Tuba
- Percussion
- Violin
- Viola
- Cello
- Contrabass

**153. Opera Technique** (2) I, II
Training in interpretation and characterization of light and grand opera. Sp cific work in coordination of opera ensemble.

**166. Honors Course** I, II (Credit to be arranged)
To be arranged after consultation with the chairman of the department. Ref to the Honors Program.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of d partment chairman.

## ACTIVITY COURSES

The activity courses are devoted to the study in detail and the public perforn ance of a wide range of representative literature for each type of ensemble and t provide students with practical experience in rehearsal techniques.

*** 170A-170B. Chamber Music** (1-1) I, II
Sections for string, woodwind, brass and piano ensemble groups. Permission c the instructor required.

**170C-170D. Chamber Music** (1-1) I, II
Continuation of Music 170A-170B.

**172A. Beginning Instrumental Ensemble** (½) I, II
Open to all instrumental students. Group performance of simple orchestral part and band scores. Prerequisites: Music 20A, 25A, 30A, or equivalents, one or more

**172B. Intermediate Instrumental Ensemble** (½) I, II
Group performance of orchestral and band scores of more advanced grade. Mate rials covered will prepare the student for minor parts in either the symphony orchestr or the symphony band. Prerequisites: Music 172A or equivalent.

*** 175ABCD. Symphony and Marching Band** (2-2-2-2) I, II
Permission of the instructor required.

*** 180ABCD. Symphony Orchestra** (1-1-1-1) I, II
Permission of the instructor required.

*** 185ABCD. Chorus** (1-1-1-1) I, II
Permission of the instructor required.

*** 186ABCD. Treble Clef** (1-1-1-1) I, II
Permission of the instructor required.

*** 187ABCD. Men's Glee Club** (1-1-1-1)
Permission of the instructor required.

*** 188ABCD. Workshop Chorus** (½-½-½-½) I, II
Open to students who do not have music as a major or minor field and who are interested in singing standard choral works. No entrance examination required. Closed to music majors and minors.

### Graduate Courses

**0A-200B. Special Problems in Music** (2-2) Year, I, II
A graduate course in which students may carry out projects in various fields of usic under the direction of faculty members who are specialists in the field chosen. tudents registering for this course must apply for work within a certain field after nference with the music faculty.

**3A-203B. Musicology** (2-2) I, II
Survey of bibliography and methods of research in music history and literature. mphasis upon interrelationship of musical developments and trends in other arts. ompletion of an acceptable project in fields of investigation chosen by the student. rerequisite: permission of the instructor. Advanced courses in harmony, composition, d form and analysis are desirable.

**6A-206B. Composition** (2-2) I, II
Music composition in the larger forms. Students will be required to submit a mplete work in one of the larger musical forms as a project in the course. Preequisite: permission of the instructor.

**0. Bibliography** (1) I, II
Exercises in the use of basic reference books, journals, and specialized bibliogaphies, preparatory to the writing of a master's project or thesis.

**8. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; be arranged with department chairman and instructor.

**9. Thesis or Project** (3) I, II
Guidance in the preparation of a project or thesis for the master's degree.

## CONDITIONS UNDER WHICH CREDIT MAY BE GIVEN FOR MUSIC STUDY UNDER PRIVATE INSTRUCTORS

Credit may be allowed for private instruction in music under the following nditions:

1. The applicant for such credit must be either a regularly enrolled student in e Music Department of the college (that is, a music major or minor), or he must ave as a prerequisite or be taking concurrently with his private study, three units hosen from these specific courses: Music X, 7A, Aesthetics 2, or 102.
2. The instructor giving such private work must be approved by the Music epartment. All private work and names of all such teachers must be registered in e office of the Music Department chairman at the beginning of the semester.
3. Under no circumstances may a student change teachers in the middle of a emester without first notifying the chairman of the Music Department and securing is permission for this change.
4. In case of first semester of private study in San Diego State College, the tudent is required to take a placement examination conducted by the Music Departent faculty at the beginning of the semester, which will show the status of the tudent at the beginning of his work.
5. Students who have dropped out of school, or have stopped taking Applied usic for credit for one semester or more, upon the resumption of that instruction for redit are required to take the placement examination.
6. Evidence that the standards of the Music Department have been met will be hown by an examination conducted by the Music Department faculty at the end of the emester.
7. Ten clock hours of lessons and adequate preparation to pass the Applied usic examinations and the curriculum requirements of the Department are required or one unit of credit.

# NURSING

## IN THE DIVISION OF LIFE SCIENCES

### Lower Division Courses

**1. Introduction to Professional Relationships** (1) I

An introduction and orientation to the profession of nursing. Considers ethic principles, the nurses' code, and the development of methods for solving person social, and professional problems which will face the student nurse.

**20A. Nursing Arts** (1) I

An orientation to hospital and nursing service with an introduction to publ health and hygiene. Prerequisites: Zoology 8 and Psychology 1.

**20B. Nursing Arts** (1) Summer

Organization and care of the environment of the patient and principles of ant sepsis, asepsis, disinfection, and immunity. Prerequisites: Nursing 20A and Ba teriology 1. Bacteriology 1 may be taken concurrently.

**20C. Nursing Arts** (4) I

Laboratory experience at the hospital in caring for the patient. Opportunity given to apply the basic, scientific principles of nursing that are learned in this an preceding nursing arts courses. Prerequisite: Nursing 20B.

# OCEANOGRAPHY

## IN THE DIVISION OF LIFE SCIENCES

### Upper Division Courses

**100. The Oceans** (2) I

Physical and biological aspects of the oceans and their significance to man problems of modern oceanography. One unit to apply as physical and one as biologic science. Prerequisites: Introductory courses in physical and life sciences.

# PHILOSOPHY

## IN THE DIVISION OF SOCIAL SCIENCES

*Major* work is not offered in philosophy.

### Minor

A *minor in arts and sciences* is offered in philosophy. The minor consists of 1 to 22 units in philosophy, nine units of which must be in courses carrying uppe division credit.

A *teaching minor* is not offered in philosophy.

### Lower Division Courses

*** 1A. Introduction to Philosophy** (3) I, II

The place of philosophy in intelligent living. The methods, values, and areas o philosophical inquiry. Through discussion procedures, each student is encouraged t think independently on issues in ethics and religion.

*** 1B. Introduction to Philosophy** (3) I, II

The nature of philosophical inquiry as applied to problems of knowledge an reality. Through discussion procedures, the student has opportunity and is encourage to formulate his own tentative conclusions.

*** 3A-3B. History of Philosophy** (3-3) Year, I

The development of the major concepts of philosophers in the western tradition Relations of philosophy to science, art, religion, and social and political conditions 3A covers the ancient and medieval period, 3B the modern. 3A is not prerequisit for 3B.

**20. Logic** (3) I

The use of logic in science and practical life. Analysis of fallacies. Logic and language. Formation and validation of hypotheses. Interpretations of probability. The logic of experimentation.

### Upper Division Courses

**101. Contemporary Philosophy** (3) II
The major philosophical issues, movements, and figures in American and uropean philosophy of the twentieth century. Prerequisite: 3 units selected from ilosophy 1A, 1B, 3A, or 3B.

**1A-111B. Theory of the State** (3-3) Year, I
The nature of the state, its organization and activities, and its relation to the dividual and to other states. Special attention is given to recent developments in e field of political thought. Not open to students with credit for Political Science 1A-111B.

**1. Deductive Logic** (3) II (Offered in 1952-53 and alternate years)
Definition, classification, and division. The forms of reasoning. Analysis of opositions. Immediate inference. The syllogism. Dilemmas. Modern symbolic logic.

**8. Theory of Ethics** (3) I
A study of significant and typical value theories and systems and of the concrete oblems such theories seek to explain. The emphasis will be placed on moral values. ie student will be encouraged to examine critically his own system of values. (Forerly Philosophy 130.)

**129. Social Ethics** (3) II
Ethical issues of contemporary life. Individualism vs. collectivism; democracy vs. ctatorship; ethical problems arising in law, medicine, business, government, and terpersonal relationships.

**6. Philosophy of Art** (3) II
The nature of esthetic experience. The principal theories of art, both traditional id contemporary, are studied at length, both in relation to actual artistic production id to the role of art in society.

**7. Philosophy of Science** (3) I (Offered in 1952-53 and alternate years)
A critical examination of the basic concepts and methods underlying conmporary scientific thought. Contributions of the special sciences to a view of the iiverse as a whole. Prerequisite: 3 lower division units in philosophy.

**9. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of inructor.

## PHYSICAL EDUCATION

### IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

A *major in arts and sciences* is offered in *physical education* for the A.B. degree. ourses in the major are in addition to 45 units in general education courses. A minor a field other than physical education is required.

*Major for Men:* Lower division requirements: Two units of physical education tivity courses in general education; Physical Education 53, 63, 64, 72; Zoology 8. pper division requirements: 26 upper division units to include seven units from iysical education courses numbered 141 to 148, inclusive; Physical Education 5, 168, 170A or 170B, 177; and eight units selected from courses in health, physical lucation, or recreation.

*Major for Women:* Lower division requirements: Four units of physical educaon activity courses to include Physical Education 1A, 2A-2B, 3A-3B, 4, 5, and 6 (two these units may be counted as general education); Physical Education 53, 72, and ology 8. Upper division requirements: 26 upper division units to include Physical ducation 155, 156A-156B, 160, 161, 168, 170A or 170B; and nine units selected from urses in health, physical education, or recreation.

A *teaching major* is offered in *physical education* for the general secondary and ecial secondary school credentials. For statement of requirements, refer to these edentials.

### Minor

A *minor in arts and sciences* is offered in *physical education*. The minor consis of 15 to 22 units in physical education, nine units of which must be in courses carryi upper division credit. The minor should be planned in consultation with the departme chairman.

A *teaching minor* is offered in *physical education* for the general secondary, ge eral elementary, and kindergarten primary credentials. For statement of requiremen refer to these credentials.

### Required Activities

All lower division students must elect one or more activity course each semest Two units of activity credit must be offered for graduation, but no more than o activity course in any one semester may be counted toward this requirement. Studen carrying fewer than 12 units during any semester may obtain permission from t Dean of Instruction to postpone taking physical education, but may not be exempt therefrom. No permanent excuses from required activity courses will be grante The college physician, in conjunction with the chairman of the department, w consider stringent cases on an individual basis and make recommendations.

A medical examination is given each student when entering college and reco mendation is made as to type of activity most beneficial. Individually adapted physic education classes to care for special needs are offered. The content of the requir courses is planned to give each student an opportunity to participate in many activiti of carry-over value, developmental nature, and recreational interest. An opportuni is afforded for students to participate in competitive sports and intramural program

## MEN'S DEPARTMENT

Freshmen are required to choose from courses numbered 1-10. Sophomores an upper division students may choose from all courses offered. An activity course ma be taken for credit once only.

### Lower Division Courses

### ACTIVITY COURSES

All activity courses are general education courses.

**1A-1B-1C-1D. Individual Adaptation** (½) I, II
**2. Basketball** (½) I, II
**3. Boxing** (½) I, II
**4. Gymnastics** (½) I, II
**5. Soccer** (½) I
**6. Softball** (½) II
**7. Touch Football** (½) I
**8. Track and Field** (½) I, II
**9. Volleyball** (½) I, II
**10. Wrestling** (½) I, II
**13. Archery** (½) I, II
**14. Badminton** (½) I, II
**15. Fencing** (½) I, II
**16. Golf** (½) I, II
**17. Handball** (½) I, II
**18. Tennis** (½) I, II
**19. Bowling** (½) I, II
**20A-20B. Swimming** (½) I, I
**21. Life Saving** (1) I, II
**23. Sailing** (½) I, II
**24. Hiking** (½) I, II

### INTERCOLLEGIATE SPORTS

**30. Baseball** (½) II
**31. Basketball** (½) I
**32. Cross Country** (½) I
**33. Football** (½) I
**34. Golf** (½) II
**35. Gymnastics** (½) II
**36. Tennis** (½) II
**37. Track** (½) II
**38. Wrestling** (½) II

## WOMEN'S DEPARTMENT

Freshmen may choose from courses numbered 1-11 or 20A-B. Sophomores may hoose from all courses offered. An activity course may be taken for credit once only.

The individual activities, tennis, golf, archery, badminton, swimming, and ancing are offered through the year. Candidates for the special secondary credential n physical education must select one as a major activity and two others as minors. kills in the activities must be maintained as prerequisite to the senior course, Physical ducation 185.

### Lower Division

### ACTIVITY COURSES

All activity courses, with the exception of Physical Education 22, are general ducation courses.

**A-1B. Fundamental Skills** (½) I, II
Practice in efficient fundamental body movements.

**A-2B. Folk Dancing** (Men and Women) (½) I, II
2A is a prerequisite for 2B.

**A-3B. Modern Dance** (Men and Women) (½) I, II
Basic dance movements, analysis of rhythmic elements in movement and their pplication to the dance. 3A is a prerequisite for 3B.

**. Fieldball, Soccer, Speedball** (½) I, II

**. Softball, Volleyball, Hockey** (½) I, II

**. Basketball** (½) I, II

**1A-11B. Ballroom Dancing** (Men and Women) (½) I, II
11A is a prerequisite for 11B.

**2A-12B. Advanced Modern Dance** (Men and Women) (1-1) Year, I
Advanced techniques and choreography. Criticism of student sketches, studies, nd completed dances. Prerequisite: 3A-3B.

**3A-13B. Archery** (½) Year, I, II

**4A-14B. Badminton** (½) Year, I, II

**6A-16B. Golf** (½) I, II

**8A-18B-18C. Tennis** (Beginning, Intermediate, Advanced) (½-½-½) I, II
18A is a prerequisite for 18B; 18B is a prerequisite for 18C.

**9A-19B. Bowling** (½) I, II

**0A. Swimming** (For non-swimmers only) (½) I, II

**0B. Swimming** (Intermediate) (½) I, II

**1. Life Saving** (1) I, II
Standard American Red Cross course in life saving and water safety, designed o qualify superior swimmers for Senior Life Saving Certificate.

**2. Water Safety Instruction** (1) II
Methods and materials for teaching swimming. Course designed to qualify expert wimmers for American Red Cross Swimming Instructors Certificate. Prerequisite: .E. 20B, or equivalent, and American Red Cross Senior Life Saving Certificate.

**3. Sailing** (½) I, II

**4. Hiking** (½) I, II

## MEN AND WOMEN

## PROFESSIONAL THEORY COURSES

### Lower Division Courses

**53. Physical Education in the Elementary School** (2½) I, II

The State program in physical education for the elementary school forms th basis of the course. Candidates for the Elementary Credential are required to tak the course section which includes two lectures and two laboratory periods per week Candidates for the Special Secondary Credential in physical education may take th course section which includes two lectures without laboratory periods.

**63. Professional Activities (Men)** (2) II

Practice in the skills and techniques of the dance, and experience in the organization and presentation of dance materials.

**64. Professional Activities (Men)** (2) I

The acquisition of skills and teaching techniques, and the development of knowledge and interest in the combative activities, primarily wrestling and boxing.

**72. Introduction to Physical Education** (2) I, II

History and principles of physical education and sports. Study of the objectives of modern physical education with a view toward the development of a basic philosophy and background for professional education.

### Upper Division Courses

**141. Professional Activities: Gymnastics** (Men) (2) I

The skills and teaching techniques in gymnastics. The place of tumbling, apparatus, self-testing and calisthenics in the school program. Knowledge of the rules for competition in gymnastics.

**142. Professional Activities: Swimming** (Men) (1) II

The development of skills in swimming with emphasis on the teaching techniques. Scope of course is from beginning swimming to life saving techniques.

**145. Professional Activities: Team Sports** (Men) (2) I

The skills, rules, teaching techniques, officiating, and organization of materials in such sports as soccer, touch football, softball, hockey, basketball, and other sports.

**146. Professional Activities: Individual Sports** (Men) (2) II

The skills, rules, teaching techniques, officiating, and organization of materials in such sports as handball, tennis, badminton, archery, golf, and other sports.

**147. Professional Activities: Coaching Baseball and Track** (Men) (1-2) II

Organization of practice sessions and drills for developing fundamental skills and special abilities; study of rules and officiating techniques; consideration of scheduling problems, coaching techniques and game strategy.

**148. Professional Activities: Coaching Football and Basketball** (Men) (1-2) I

Organization of practice sessions and drills for developing fundamental skills and special abilities; study of rules and officiating techniques; consideration of scheduling problems, coaching techniques and game strategy.

**151. Instructor's Course in First Aid** (2) I, II

Instructor's course in first aid, as outlined by The American Red Cross. Standard first aid techniques, care of injured, certification and record keeping, and practical work in first aid.

**155. Applied Anatomy and Kinesiology** (3) I

Anatomical and kinesiological analysis of human structure and movement. Application of analysis relative to mechanical principles as influenced by efficiency factors of body functions. Prerequisite: Zoology 8.

**156A-156B. Sports Methods** (Women) (2-2) Year, I

Analysis of skills in basketball, hockey, soccer, speedball, volleyball, and softball; methods of presenting sports to large groups; study of rules and officiating. Prerequisites: Physical Education 4, 5, and 6.

**160. Teaching of Body Mechanics (Women)** (3) I
Efficient use of the body in daily living; evaluation and classification of exercises, tudy of methods, and practice in planning and presenting material.

**161. Folk Dancing Materials and Advanced Techniques (Women)** (2) I
Folk customs, festivals, and costumes. Selection of dance materials for various ge groups. Practice in advanced techniques. Prerequisite: Physical Education 2A-2B.

**62. History and Philosophy of the Dance** (2) I
A study of the historical background of the dance, with special emphasis upon ts development, in America and its present status in education and the creative arts. Not open to students with credit for Aesthetics 162.

**64A-164B. Methods in Modern Dance** (2-2) Year, I
Methods in the teaching of modern dance. Selection of materials and course lanning for the secondary school. Prerequisite: Physical Education 3A-3B or atisfactory examination in dance skills.

**66. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**68. Physiology of Exercise** (3) II
A non-laboratory course emphasizing the relation of physiology to muscular xercise in physical activities. Prerequisites: Physiology 1A and Zoology 8 or quivalent.

**70A-170B. Recreational Leadership** (2-2) Year, I
Principles and practices in recreational leadership. Methods of instruction and pecial techniques in the activities of the recreation program. Attention to crafts, nusic, social programs, drama, special projects, dance, sports, campcraft, and outdoor ducation. Not open to students with credit for Recreation 170A-170B.

**77. Individual Program Adaptation** (3) II
The adaptation of programs for the typical individual, including physical examiations, training and prescribed exercises, follow-up, instructional problems, and valution. Three lectures and two laboratory periods per week.

**85. Techniques of Individual Sports (Women)** (1) I
Review of individual playing techniques, knowledge, rules, and teaching methods n tennis, archery, badminton, and swimming. Designed for senior majors in physical ducation, who are expected to demonstrate a high degree of competency in the sports ndicated.

**90. Administration of Physical Education in the Secondary School** (3) I, II
Problems and practices in the organization and administration of the secondary chool activity program. Study, selection and adaptation of activities, examination, and rouping of pupils, use and evaluation of tests. Selection and maintenance of equipment nd facilities.

**99. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of department chairman.

## Graduate Courses

**00. Evaluation Procedures in Health, Physical Education and Recreation** (2) I
A study of tests and measurements in the profession, with practice in their onstruction and use, and interpretation of results. Not open to students with credit r Health Education 200.

**01. Developmental Physical Education** (2) (Alternate years)
Intensive study of postural divergencies, lack of physical development, and ethods of correcting such conditions through exercise. Practice in making physical xaminations, constructing individual exercise programs, and teaching remedial xercises. Consideration of ethical procedures and limitations. Prerequisite: Physical ducation 155.

**203. Problems in Physical Education** (2) (Alternate years)
A survey of current problems facing the Pheysical Education profession, throug a review of literature, discussion of trends, and observation of school situation Analysis and evaluation of actual problems. Written reports required.

**204. Problems in Recreation** (2) (Alternate years)
A survey of current problems facing the recreation profession, through a revie of literature, discussion of trends, and observation of school situations. Analysis an evaluation of actual problems. Written reports required. Not open to students wit credit for Recreation 204.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff to be arranged with department chairman and instructor.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

## PHYSICAL SCIENCE

### IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *physical science major in arts and sciences* is offered for the A.B. degree t students who have been admitted to the teacher education program if eight units i professional education courses are completed by the date of degree candidacy. Th major is in addition to 45 units in general education, except that nine units of chemistry, physics, and mathematics may be applied toward general education requirements. Lower division requirements: Chemistry 1A-1B, Physics 4A-4B-4C (or 2A 2B-3A-3B), Mathematics 3A-3B, 4A (recommended 4B). Upper division requirements: 24 units to include a minimum of seven units in each of chemistry and physics Chemistry must include Chemistry 101A. Physics must include Physics 107 and 15 (or 148 if physics preparation is 2A-2B). Recommended: Physical Science 110 an 150. Other courses to be selected with approval of the departmental adviser. Physica Science majors are not required to complete a minor; however, candidates for the general secondary credential may wish to complete a teaching minor for the general secondary credential during the undergraduate program.

A *teaching major in physical science and general science* is offered for the general secondary and general junior high school credentials. For a statement of requirements, refer to these credentials.

### Minor

A *minor in arts and sciences* is offered in *physical science* for the A.B. degree to students who have been admitted to the teacher education program if eight units in professional education courses have been completed by the date of degree candidacy. The minor consists of a minimum of 20 units to include three or more units in at least three of the following areas: Astronomy 1; Biology 3, 4; Chemistry 2A-2B or 1A-1B; Geology 2 or 1A; Physics 2A-2B and 3A-3B or 4A-4B-4C.

A *teaching minor in physical science and general science* is offered for the general secondary, special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Lower Division Courses

*** 1. Introduction to Physical Science** (3) I, II
A general course presenting the nature of man's physical universe with materials chosen from astronomy and physics. Not open to students who have had a college course in physics or astronomy, or Physical Science 41. This course may be followed by Astronomy 9 for laboratory credit.

*** 2. Introduction to Physical Science** (3) I, II
Emphasis will be upon materials chosen from geology and chemistry to show the origins of natural materials and their use. Not open to students who have had a college course in chemistry or geology. This course may be followed by Geology 3 for laboratory credit.

***41. Man and His Physical World** (3) I, II
A general education course concerning the nature of the scientific method and selected topics in physical science. Materials will be chosen from physics, chemistry, astronomy, and geology to provide an understanding of the relations of physical science to modern life. This course may be followed by Astronomy 9 or Geology 3 for laboratory credit. Not open to students with credit for Physical Science 1.

### Upper Division Courses

***150. Readings in the Physical Sciences** (2)
Reading from selected materials with informal class discussion of topics.

# PHYSICS

## IN THE DIVISION OF PHYSICAL SCIENCES

### Major

A *major in arts and sciences* is offered in *physics* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Physics 4A-4B-4C, Chemistry 1A-1B, or their equivalents. Recommended: a reading knowledge of French or German. Upper division requirements: 24 upper division units in physics to include Physics 105A-105B, 107, 110, 158; three units chosen from Physics 102, 160, or 170; two units chosen from Physics 120, 122, or 124; and two units of Physics 198. A minor in mathematics is required, consisting of Mathematics 3A-3B, 4A-4B, or their equivalents, and Mathematics 118A-118B. Recommended: Three units chosen from Mathematics 104, 111, 119, 121, or 124. Nine units of chemistry, physics, and mathematics may be applied toward general education requirements.

A *major in arts and sciences* is offered in *physics* for the B.S. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: Physics 4A-4B-4C, Chemistry 1A-1B, Mathematics 3A-3B, and 4A-4B, or their equivalents. Upper division requirements: A minimum of 36 upper division units including Physics 102, 105A-105B, 107, 110, 158; two units of upper division laboratory; two units of Physics 198; and Mathematics 118A-118B. The program, planned in consultation with the departmental adviser for this degree, must be designed to provide a four-year terminal program for the student. A minor is not required. Nine units of chemistry, physics, and mathematics may be applied toward general education requirements.

The following additional courses are required as a part of two options approved under this degree: *Applied Physics*: Physics 106, 112 and four units of Physics 120. Recommended: Physics 114, 160, 170 and Astronomy 107. *Electronics*: Physics 104, 122, 124, 160 and either Physics 152 or Engineering 150. Recommended: Physics 114, 170 and Astronomy 107.

A *teaching major in physical science and general science* is offered for the general secondary school credential and a *teaching major in general science* is offered for the general junior high school credential. For statement of requirements, refer to these credentials.

### Minor

A *minor in physics* is offered in arts and sciences. The minor consists of 15 to 22 units in physics, six units of which must be in courses carrying upper division credit.

A *teaching minor in physical science and general science* is offered for the general secondary, special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Lower Division Courses

NOTE: A maximum of 12 units of lower division physics credit may be applied toward the A.B. or B.S. degrees.

***2A-2B. General Physics** (3-3) Year, I, II
This course is for liberal arts and certain pre-professional students who do not desire intensive physics preparation. Lectures, demonstrations and discussions. 2A, Properties of Matter, Mechanics and Heat. 2B, Electricity, Magnetism, Sound and Light. Prerequisite: Two years of high school mathematics. Physics 2A is a prerequisite for 2B. Recommended concurrent registration in Physics 2A and 3A, and in Physics 2B and 3B.

***3A-3B. Physical Measurements** (1-1) Year, I, II

A laboratory course to accompany Physics 2A-2B. 3A: Properties of Matter Mechanics and Heat. 3B: Electricity, Magnetism, Sound and Light. One three-hour laboratory per week. Prerequisite for 3A: Concurrent or previous registration in Physics 2A. Prerequisite for 3B: Concurrent or previous registration in Physics 2B

**4A-4B-4C. Principles of Physics**

The following sequence of three courses is designed to give a thorough background in the fundamental principles of physics, with applications to practical problems. Each course three lectures and one three-hour laboratory per week.

**4A. Mechanics** (4) I, II

The mechanics of solids and fluids. Prerequisites: Credit for Mathematics 3A and concurrent registration in Mathematics 3B. Not open to first semester freshmen.

**4B. Electricity** (4) I, II

Magnetism, electricity and elementary electronics. Prerequisite: Physics 4A.

**4C. Heat, Sound and Light** (4) I, II

Heat and elementary thermodynamics, sound and light. Prerequisite: Physics 4B.

***5. Physics of the Home** (4) I

Everyday applications of physics in heating, lighting, insulating, cooking, refrigeration, air-conditioning, sound, music, mechanical and electrical appliances. Not open to students with credit for Physics 2A, 2B, 4A, 4B, or 4C. Three lectures and one laboratory period per week.

**14. Acoustics of Music** (3) II

Fundamentals of acoustics and audition underlying musical phenomena presented in descriptive and nonmathematical terms. Prerequisite: A technical understanding of music.

**22. General Radio** (2) I

Theory of vacuum tubes and their applications to communication, television, and industry. This course may be taken for credit in addition to the maximum 12 units of lower division physics toward the A.B. or B.S. degree.

## Upper Division Courses

**102. Basic Electronics** (3) I

Principles of electron tubes and resistance loaded amplifiers. Negative feedback, and its application to regulated power supplies, cathode followers and direct coupled amplifiers. Prerequsite: Physics 4B.

**104. Communications** (3) II

Power amplifiers, oscillators, modulators and detectors. Radio transmitters and receivers for amplitude modulation and frequency modulation. Television systems. Antennas and radio wave propagation. Prerequisite: Physics 102 or permission of the instructor.

**105A-105B. Analytical Mechanics** (3-3) Year, I

Fundamental principles of Newtonian mechanics by elementary vector methods. 105A: Statics and kinematics of rigid bodies. 105B: Dynamical principles underlying linear and rotary motion of rigid bodies, with additional work in vibration and impact. Prerequisite: Physics 2A-2B or 4A and a working knowledge of calculus.

**106. Optics** (3) II

A study of reflection, refraction, dispersion, interference, diffraction, double refraction and polarization, with applications to optical instruments. Also wave propagation, radiation, spectra and the nature of light. Prerequisite: Physics 2B-3B or 4C.

**107. Electrical Measurements** (2) I

The theory and application of electrical measurements, including the measurements of current, voltage, power, resistance, capacitance and inductance. Stress on determination of probable errors of measurements. An hour lecture and a three-hour laboratory per week. Prerequisite: Physics 2B-3B or 4B and a working knowledge of calculus.

**110. Alternating Current Circuits (3) I**

The operator j applied to circuits containing resistance, capacitance and inductance; series and parallel resonance; coupled circuits; transients; practical circuit elements, networks. Prerequisite: Physics 4B and Mathematics 4A.

**112. Heat and Thermodynamics (3) II**

A study of the thermal properties of matter with an introduction into the kinetic theory of gases and the laws of thermodynamics. Prerequisites: Eight units in physics and a working knowledge of calculus.

**114. Acoustics (3) II**

A study of wave motion and its application to the production, transmission and reception of sound. Material in architectural acoustics, speech and hearing, and acoustical instruments is presented. Prerequisites: Physics 2B-3B or 4C.

**120. Advanced Laboratory (2) I, II**

Advanced experimental measurements in a branch of physics listed below. The course may be repeated for each subject. With the consent of the instructor and adviser, the course may be repeated in the same subject but with new material. Prerequisite: Consent of the instructor.

A. Acoustics
B. Atomic Physics
C. Electricity
D. Heat and Pyrometry
E. Mechanics
F. Optics

**122. Electronics Laboratory (2) I**

An experimental study of electron tubes and their associated circuits. Study of cathode ray oscilloscope, vacuum tube voltmeter, characteristics of power supplies, amplifiers and filter systems. An hour lecture and a three-hour laboratory per week. Prerequisite: Previous or concurrent registration in Physics 102, or permission of instructor.

**124. Radio Measurements (2) II**

Laboratory measurements of the parameters of resonant circuits at radio frequencies. Study of the properties of oscillators, modulators, detectors and wave guides. An hour lecture and a three-hour laboratory per week. Prerequisite: Physics 122 and previous or concurrent registration in Physics 104.

***148. Introduction to Modern Physics (3) II**

A nonmathematical course covering recent developments in the field of physics, including X-rays, radio-activity, cosmic rays, atomic and nuclear energy. Prerequisite: Upper division standing. Not open to students who have credit for Physics 4A-4B-4C, or equivalent.

**152. Advanced Electronics (2) I**

Theory of vacuum tubes, ultra-high frequency systems and selected topics from contemporary electronics. Prerequisite: Physics 104.

**154. Television Circuits (2) II**

The principles, analysis, and design of television transmitting and receiving systems. Special operational mathematical techniques will be included. Prerequisite: Physics 104 or equivalent.

**158. Atomic Particles (3) I**

A study of experimental evidence for the existence and properties of the elemental atomic and nuclear particles. Introduction to the fields of atomic and nuclear physics. Prerequisite: Physics 4A-4B-4C, or equivalent.

**160. Circuit Analysis (3) II**

A study of filter design, transmission lines, and network analysis. Prerequisite: Physics 110.

**166. Honors Course (Credit to be arranged) I, II**

An individual study arrangement for students admitted to the Honors Program. Enrollment through the department chairman, subject to the approval by the Committee on Honors. Refer to the Honors Program.

**170. Electromagnetic Theory (3) II**

Electrostatics and magnetostatics treated by vector methods; chemical an thermal effects; motion of ions in electric and magnetic fields; magnetic field of current; electromagnetic induction and radiation. Prerequisites: Physics 110, and working knowledge of vector analysis and differential equations.

**198. Senior Report (2) I, II**

Each student will work on a project in physics and make oral reports to th class. A complete written report is required on each project. One discussion period an one three-hour laboratory per week. Prerequisite: permission of instructor.

**199. Special Study (1-2) I, II**

Individual study or laboratory work on a special problem in physics selected b the student. Each student will be assigned a member of the staff who will supervis his work. Credit, hours and topics to be arranged in each case. Six units maximun credit.

### Graduate Courses

**200. Seminar (2-2) I, II**

An intensive study of some phase of advanced physics.

A. Mathematical Physics
B. Theoretical Mechanics
C. Kinetic Theory of Gases
D. Advanced Acoustics
E. Advanced Electronics
F. Electromagnetic Radiation
G. Atomic Physics
H. History of Physics
I. Fluid Mechanics
J. Vibration
K. Advanced Electricity
L. Microwaves

**290. Bibliography (1)**

Exercise in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study (1-6) I, II**

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis (3)**

Guidance in the preparation of a project or thesis in physics for the master's degree.

## PHYSIOLOGY

### IN THE DIVISION OF LIFE SCIENCES

Major or minor work is not offered in physiology. Courses in this field may be used as part of the major in zoology or life sciences, and are recommended as part of the lower division requirements for the major in psychology, and for the physical education credential.

### Lower Division Courses

**1A. Human Physiology (3) II**

A lecture course considering the functions of the human body, and including a brief review of the microscopic and gross anatomy of the structures discussed. Prerequisites: Elementary chemistry and high school or college biology or zoology. Three hours of lecture per week. Credit reduced to 2 units, for students having credit for Zoology 20.

**1C. Human Physiology (2) II**

A study of the human functions through laboratory experiments and demonstrations. Six hours of laboratory per week. Prerequisites: Physiology 1A completed or in progress, or Biology 3 and 4, or Zoology 1A-1B, and elementary chemistry.

### Upper Division Courses

**101. General Physiology (4) II**

Fundamentals of plant and animal functions. Two lectures and two laboratory periods per week. Prerequisites: Biology 3 and 4 or Zoology 1A-1B and Chemistry 1A-1B or Chemistry 2A-2B. Not open to students with credit for Zoology 101.

# POLITICAL SCIENCE

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *political science* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower ivision requirements: Political Science 1A-1B or 71A-71B. Upper division requirements: 24 units to include (a) three units in Political Science 199 and (b) 21 upper ivision units in political science distributed among two of the following groups: *Group : Theory and government*, courses numbered 100-139; *Group II: Administration*, ourses numbered 140-149; *Group III: International affairs*, courses numbered 150-179. A minor is required and is to be chosen under the direction of the chairman of the department.

Students majoring in political science are advised to become as familiar as possible with related social science fields. It is recommended that majors should have a eading knowledge of at least one foreign language. For students who expect to enter overnment service, two programs of study are offered: The Public Administration Curriculum and the Public Personnel Management Curriculum. For a description of hese curricula, refer to the section of the bulletin entitled: Professional and Vocational Curricula.

A *teaching major* is not offered in political science; however, courses in political cience may be used as part of the *teaching major in social science* for the general secondary and general junior high school credentials. For statement of requirements, efer to these credentials.

### Minor

A *minor in arts and sciences in political science* is offered. The minor consists f 15 to 22 units in political science, nine units of which must be in courses carrying upper division credit.

A *minor in arts and sciences in public administration* is also offered. The minor consists of Political Science 71A-71B in the lower division; Political Science 140A-140B and three units from 198 or other political science course in the upper division.

A *teaching minor in social science* is offered for the special secondary, general elementary, and kindergarten-primary credentials. For statement of requirements, refer to these credentials.

### Lower Division Courses

**1A. Introduction to Government** (3) I, II

Theories and principles of government, with special attention to the problems created by modern industrialism and population pressures.

**1B. Introduction to Government** (3) I, II

A comparative survey of selected foreign governments: Their constitutional principles, political institutions, and governmental problems.

**71A-71B. Introduction to American Government and Politics** (3-3) Year, I, II

Semester I: Governmental organization in the United States; the federal system; the organization, powers and functions of the legislative, executive and judicial branches of the government; the relations between federal, state and local units of government.

Semester II: Expansion of governmental functions and the development of means of democratic control; an examination of the increased use of government as an instrument of social control; the history, motivation, methods and control of political parties; nominations, elections and minority groups; pressure politics.

This year course meets the graduation requirement in American history, institutions and ideals, and the United States Constitution. The second semester course, 71B, also covers the required materials in California state and local government.

### Upper Division Courses

**101. American Institutions** (3) I

The principles of the Constitution of the United States of America, and a survey of the political and social institutions which have developed under the Constitution.

This course meets the graduation requirement in the United States Constitution and California state and local government.

*** 105. American Political Thought (3) II**
A survey of the development of American ideas concerning political authorit from the period of colonial foundation to the present time.

*** 111A-111B. Theory of the State (3-3) Year, I**
The nature of the state, its organization and activities, and its relation to th individual and to other states. Special attention is given to recent developments in th field of political thought. Not open to students with credit in Philosophy 111A-111B.

**120. Political Parties (3) I**
A critical analysis of the political party as a part of the process of government party organization and activities; nominating and campaign methods; theories an functions of the party system; party responsibility. Special emphasis will be place upon the function of the two-party system in American government.

**121. Basic Factors in American Politics (3) I**
An analysis of American political, legal, economic, and social factors in thei relation to our political system and the public interest.

**122. Propaganda and Public Opinion (3) II**
A study of the forces which mold the American public mind, the practice o propaganda, a description and analysis of public relations, pressure groups and thei effect in American public life. Not open to students with credit for Journalism 132.

**128. Government Report Writing (2) I**
Actual writing problems in government, including surveys, recommendations studies, analyses, progress reports, annual reports, etc., are discussed and their solu tions analyzed. Attention to methods of collecting and organizing data, and practic in effective presentation of facts and ideas. Special consideration is given to problem of class members.

**135. California Law of Municipal Corporations (2) II**
California law governing the nature, regulation and control of the counties charter cities, sixth class cities, school districts and special districts. The creation alteration, dissolution, legal actions by and against, powers and duties; rights an liabilities of local governments.

**136. Administrative Law (2) I**
The law of public office and public officers, powers of administrative authorities scope and limits of administrative powers, remedies against administrative action.

*** 137A-137B. Constitutional Government (2-2) Year, I**
Modern government and politics; its theoretical foundations, institutions and problems. Emphasis will be on American experience with useful comparisons with other countries. Either semester may be taken first. This year course meets the graduation requirement in the United States Constitution and California State and Local Government.

*** 139A-139B. American Constitutional Development (3-3) Year, I**
A study of the work of the Convention of 1787 and of significant phases of American constitutional law. Not open to students with credit for History 172A-172B. This year course meets the graduation requirement in American history, institutions and ideals, and United States Constitution. The second semester course, 139B, also covers the required materials in California state and local government.

**140A-140B. Principles of Public Administration (3-3) Year, I**
Semester I: The administration of public services, staff and line functions, theories of organization and practices, and procedures of different types of governmental agencies.

Semester II: Principles and problems in governmental budgeting, performance and capital outlay, budget procedures, organization and administration of personnel programs, controls over administrative behavior, responsible bureaucracy and professionalism in the public services. Not open to students with credit in Political Science 147A-147B.

**2. State Government (3) II**

A study of the political structure and its operation used in the carrying on of the nctions exercised by the states; state-federal relations; state-local government rela- ons; particular emphasis on California government. This course meets the graduation quirement in California State and local government. Not open to students with edit for Journalism 142.

**3. Municipal and County Government (3) I**

A study of the organization and its operation used to carry into effect the func- ons assigned to local governmental units; particular emphasis upon local government California. This course meets the graduation requirement in California State and cal government. Not open to students with credit for Journalism 143.

**4. Introduction to Public Personnel Administration (2) I**

An introduction to the field, giving general coverage of the problems involved in cruitment, placement, supervision, etc., of public employees. Prerequisite: Permis- on of instructor.

**5. Public Personnel Management (2) II**

An advanced course involving detailed examination of management of personnel public service. Prerequisite: Permission of instructor.

**6. Wage and Salary Administration (3) I**

Problems of job analysis; major techniques of job evaluation, including ranking, assification, point system, factor comparison; problems of wage and salary admin- tration, incentive pay methods; merit rating plans. Not open to students with credit r Commerce 154.

**7A-147B. Public Administration (2-2) Year, I**

Administrative organization. Relationship between federal, state, and local vernments. Budget, personnel, management, and control. Not open to students with edit for Political Science 140A-140B.

**8. The Government of Metropolitan Areas (2) I**

A study of the governmental problems of metropolitanism; overlapping of gov- nments, services, planning and financing. The use of intergovernmental contracts r public service, proper public service areas, and special authorities.

**150A-150B. International Relations (3-3) Year, I**

A historical and analytical consideration of the basic factors—historic, geo- aphic, economic, ideologic, and strategic—which underly and condition the modern nflict between the "sovereign state" and the "community of nations." Fall semester: rigins and development through the nineteenth century. Spring semester: Twentieth ntury experimentation and conflict.

**1SP. The Contemporary World (1) II**

A series of lectures by members of the faculty on selected problems of the current ternational scene. Reports required of students enrolled for credit.

**2. International Organization (3) I**

A critical analysis of the organization by which the international community eks to provide for the exercise of legislative, administrative and judicial functions the international level: Diplomatic and consular corps; conferences; administra- on through commissions and unions; amicable procedures for settlement of dis- ites; The League of Nations-United Nations experiment.

**3. Principles of International Law (3) I**

The function of law in the international community. The historical development the ideas and rules of international law and their place in the modern diplomatic d legal structure.

**4. International Law and the Courts (3) II**

A case study of the application of the rules of international law in national d international courts.

**5. Dynamics of Modern International Crises (3) I**

The determination and analysis of facts surrounding international crises since orld War II; the evaluation of these crises and their effects upon external policies the United States and the operations of the United Nations. Prerequisite: Consent the instructor.

**158A-158B. American Foreign Policy** (3-3) Year, I
Lectures and reading in the field of American foreign relations since 1776, wit special emphasis, in the second semester, upon affairs since 1900. A general surve course. Not open to students with credit for History 176A-176B.

**160. Government of the British Dominions** (3) II
Development of the new British Empire and imperial relations of the sel governing dominions; government of Canada, Australia, New Zealand, and Sout Africa; conditioning historical, economic and racial factors. Not open to students wit credit for History 156B.

**162. Government of England** (3) I
The structure and functioning of English parliamentary system with emphasi upon present day political principles and parties.

**165. Governments of Latin America** (3) II
The governments of leading and representative Latin American states. Emphasi on the background and evolution of current political institutions and philosophie

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**167. Government of the Soviet Union** (3) I
Theory and practice of government in the Soviet Union, with some attention t Russian foreign affairs.

**181. Supervisory Staff and Employee Training** (3) II
Training as a management function and as an aspect of communication; operat ing methods and structure of training departments; types of training; use of com munity facilities; evaluation of training results. Projects designed to meet specia student needs. Not open to students with credit for Business 155.

**182. Techniques of Administrative Analysis** (2) II
Areas and problems of administrative research; methods of analyzing structure and procedures in organizations; planning and administration of programs; desig of forms; job classification and salary surveys; preparation of administrative reports

**191. Field Studies in Government** (3) II, Summer
Study of organization, policies and functions of selected government agencies Discussion by responsible officers and inspection of work operations and facilitie in management, public safety, public works and utilities, and other major governmenta operations. Prerequisite: permission of instructor.

**198. Internship in Public Administration** (3-6) I, II
Students will be assigned to various government agencies and will work unde joint supervision of agency heads and the course instructor. Participation in staf and internship conferences. Admission by permission of the instructor.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## Graduate Courses

**200A-200B. Seminar in Government** (2-2) Year, I, II

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

# PSYCHOLOGY

## IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences* is offered in *psychology* for the A.B. degree. Courses the major are in addition to 45 units in general education courses. Two plans are ovided for the major: One for those students expecting to pursue the study of ychology beyond the A.B. degree; the other for those students who wish to extend eir general education in the field of psychology.

Lower division requirements for all majors: Psychology 5 and 6. Recommended lection of courses in related fields: Six units in biology, physiology, and/or zoology; ree units in philosophy; and six units in anthropology and/or sociology.

The upper division requirements for each major will be determined by the plan lected by the student, but a minimum of 24 upper division units in psychology is quired for a major.

Psychology majors are not required to complete a minor.

A *teaching major:* A major in psychology may be combined with two teaching inors for a general secondary credential. Refer to the outline of requirements for this edential.

### Minor

A *minor in arts and sciences* is offered in psychology. The minor consists of 15 22 units in psychology, nine units of which must be in courses carrying upper ivision credit.

A *teaching minor* is not offered in psychology.

### Plan A Major

Plan A is for a nonprofessional major in psychology and is designed to provide the udent with a greater understanding of his expanding group relations leading to happy nd effective family and community living. The recommended pattern of courses for is program is not designed to facilitate graduate and professional study in psychology.

The upper division requirements for Plan A majors: Psychology 106, 131, 145, nd electives to complete the major. It is expected that each student under Plan A will elect, with the assistance of his adviser, a pattern of courses in line with his particular bjectives in pursuing Plan A. For most students in Plan A, the following courses will e found particularly helpful: Psychology 105A, 107, 122, 132, 150, and 152.

To facilitate the purpose of Plan A the following courses in other departments re recommended as electives: Anthropology 1A-1B; Biology 1 or Zoology 1A-1B; conomics 1A-1B and 102; Health Education 90; Philosophy 1A-1B; Zoology 160 and 65; and courses in home economics.

### Plan B Major

The purpose of Plan B is to facilitate the specific preparation of those students ho wish to pursue graduate and professional preparation in Clinical, Industrial and ersonnel, and Theoretical-Experimental Psychology. To this end, three separate prorams are suggested under Plan B to provide an undergraduate basic preparation for urther study in these fields.

Upper division requirements for all Plan B majors: Psychology 104A, 105A, 60A or 160B, and additional courses to complete the major selected from one of the roups listed below. For each of the three patterns of special preparations under lan B, the following courses are recommended:

*Preclinical:* Psychology 105B, 106, 131, 145, 150, 151, 152, 160A. The following ourses are recommended in other departments: Anthropology 1A-1B; Biology and 4, or Physiology 1A and 1C; Philosophy 1A-1B or 3A-3B, 20, and 129; Sociology 135 and 170; Speech Arts 176 or 179A-179B; and Zoology 165. A natural science ninor is recommended.

In selecting courses and choosing electives, the student is urged to consult his dviser and the Bulletin on the requirements for special secondary credentials for chool psychometrist and for correction of speech defects.

*Pre-Industrial and Personnel:* Psychology 121, 122, 124, 131, 132, 145, 152, 60B. The following courses are recommended in other departments: Business 153 and 54; Economics 1A-1B, 100A, 150, 151, 170 and 185; Philosophy 20; Political Science 44, and 145; Sociology 50, 51; and six units selected from Sociology 135, 170, 180, 90; and Speech Arts 4; a minor in business, economics, political science, or sociology s recommended.

*Theoretical-Experimental:* Psychology 104B, 131, 140, 145, 150, 160A, 160B, an 177. The following courses are recommended in other departments: Chemistry 2A-2B Foreign Language; Mathematics 1, 3A, and 3B; Philosophy 1A, and 20; Physic 2A-2B, and 3A-3B; Physiology 1A and 1C; Zoology 1A-1B, 100, and 165. A mathematics or natural science minor is recommended.

## The Master of Arts Degree

The Master of Arts degree is offered in the department as part of the fulfillmen of requirements for the School Psychologist credential. It is also possible to obtain Master's degree if one obtains a School Psychometrist credential. Refer to these credentials and to the Master of Arts degree.

All candidates for the degree of Master of Arts in psychology are required t include Psychology 104A, 105A, 150, 160A and 160B or their equivalents in thei graduate program of study or to have had these courses in their undergraduat training.

## Lower Division Courses

***1. General (3) I, II**

An introduction to some of the facts, principles, and concepts which are basic to understanding human behavior.

**2. Psychology Laboratory (1) I, II**

Application of experimental methods to psychological problems. Includes design and execution of experiments. One lecture and three laboratory hours. Prerequisite: Psychology 1.

**5. Principles of Psychology: Basic Organization of Behavior (3) I, II**

The basic sensory, neural and motor mechanisms and their functions in human behavior. Prerequisite: Psychology 1 and sophomore standing.

**6. Principles of Psychology: Learning and Integrated Behavior (3) I, II**

Attending, perceiving, and learning, including social learning, personality development, and conditions of efficient work. Prerequisite: Psychology 1 and sophomore standing.

**11. Applied Psychology (3) I, II**

A survey of the application of the basic principles of psychology to business, education, industry, government, law, medicine and related fields. Prerequisite: Psychology 1.

**12. Mental Hygiene (3) I, II**

An examination and interpretation of the factors which go into the making of the person as he adapts himself to the social world about him. The development of the normal personality. Prerequisite: Psychology 1.

## Upper Division Courses

**104A. Statistical Methods in Psychology (3) I, II**

An introduction to the use of quantitative methods in psychology, with emphasis upon measures of central tendency and variability, graphic methods and percentiles, linear correlation, and the applications of the normal probability curve. Prerequisite: Psychology 1. Not open to students with credit for Economics 140 or Sociology 103.

**104B. Advanced Statistics (3) II**

A further study of quantitative methods in psychology with particular emphasis on methods of correlation, chi-square, and contingency, and an introduction to the analysis of variance. Prerequisites: Mathematics C and Psychology 104A, or permission of instructor.

**105A. Psychological Testing (Group) (3) I, II**

The basic principles of testing. The selection and critical evaluation of group tests of intelligence, personality, aptitude, interest and achievement. Prerequisite: One of the following courses: Psychology 5, 11; Education 102A, 102D. Not open for credit to students with credit for Education 105A.

**105B. Psychological Testing (Individual) (3) II**

The principles of individual testing. Instruction and practice in the administration of the Stanford-Binet, Wechsler-Bellevue, similar tests. Prerequisite: Psychology 105A and permission of instructor.

**106. Developmental Psychology (3) I, II**
A study of the psychological development of the normal individual from concepion through childhood, adolescence, maturity, and old age. Stress is laid upon the nterdependence of the various periods of the individual's life. Prerequisite: Psyhology 1.

**07. Psychology of Later Maturity (3) II**
The psychological, physiological, and sociological factors influencing behavior in he later years of life. Prerequisite: Psychology 1.

**21. Personnel and Industrial Psychology (3) I, II**
Psychological principles applied to problems of selection and assignment of industrial personnel, employee training, and fatigue. Prerequisite: Psychology 104A, or Economics 140, or Sociology 103.

**22. Public Opinion Measurement (3) I**
The history, methods, and problems of public opinion and attitude measurement. Emphasis will be placed upon the polling of consumers and voters. Students will be iven field experience. Not open to students with credit for Journalism 122.

**24. Engineering Psychology (2) II (Not offered in 1952-53)**
Psychological problems of man-machine systems. Visual, auditory, and other sensory factors involved in the inter-relations between man and machines. Motion-study, work arrangement, fatigue, and environmental influences in relation to production. Prerequisite: Psychology 1 and upper division standing.

**30. Educational Psychology (2) I, II**
To develop understanding of the applications of psychological research for effective classroom teaching. Observation and field work required. Prerequisite: Psycholgy 1. Not open to students with credit for Education 130.

**31. Foundations of Personality (2) I**
The human organism in its interaction with the environment and the resultant hanges in the development of the personality. Prerequisite: One full year of psyhology or equivalent.

**32. Personality Adjustment (2) II**
The application of the fundamental principles of personality to problems of adaption. Mental hygiene as a local, state, and national problem. Prerequisite: Psychology 31 or permission of instructor.

**40. Physiological Psychology (3) I, II**
The neurophysiological basis of behavior, with particular attention to the psyhophysiology of sensory and motor processes, emotion, bodily needs, and learning. Prerequisite: Psychology 5 and 6, or 10 units in biological sciences.

**145. Social Psychology (3) I, II**
The major problems and findings concerning group behavior and group memberhip, the socialization of the individual, and processes of social interaction. Not open o students with credit for Sociology 145.

**50. Abnormal Psychology (3) I, II**
The psychology of behavior disorders, with emphasis on the amentias, neuroses, nd psychoses. Prerequisite: One full year of psychology.

**51. Introduction to Clinical Appraisal (3) I**
A study of diagnostic devices in psychology, tests of clinical significance, ratings, nterviewing for securing information. Projective and case study analyses; problems of nsight, rapport, empathy, and prediction of individual behavior. Prerequisites: One f the following: Psychology 105A, 106, 131, 140, or 150.

**52. Introduction to Methods of Counseling (3) II**
An introduction to problems and methods of counseling and adjustment. The tilization of psychological principles and techniques in dealing with various types of uidance situations. Prerequisite: Enrollment limited to senior and graduate students n psychology or pre-social work.

**160A. Experimental Psychology** (3) I, II

Demonstrations of the principles and conditions of learning, perceiving, problem solving, and thinking. Methodology and design of experiments. Two laboratory sessions and one seminar period per week. Prerequisite: Psychology 5, 6, and 104A.

**160B. Experimental Psychology** (3) I, II

Demonstration of laws governing various sensory experience and motor activities. Experiments in space perception, errors of judgment, and conditions of work and fatigue. Two laboratory sessions and one seminar period per week. Prerequisites: Psychology 5 and 6.

**166. Honors Course** (Credit to be arranged) I, II

Refer to the Honors Program.

**170. Comparative Psychology** (3) I

A study of the behavior of animals with a view to gaining a better understanding of human behavior. An analysis of the leading experimental work on senory discrimination, learning, and intelligence of each animal group, from amoeba to man. Prerequisites: Psychology 5 and 6.

**175. Theories of Learning** (3) II (Offered 1951-52 and alternate years)

A critical study of the facts, principles, and major theories of learning. Prerequisites: Psychology 1, 5, 6, 104A, and consent of the instructor.

**177. History of Psychology** (3) II

A survey of the historical background of modern psychology. Limited to psychology majors with senior standing and graduate students.

**191. Practicum in Clinical Psychology** (1-6) I, II

A practicum in mental testing and clinical psychology in various state hospitals, mental hygiene clinics, and similar institutions. Prerequisite: Consent of the instructor.

**199. Special Study** (1-6) I, II

Individual study. Six units maximum credit. Prerequisites: senior standing and permission of instructor.

## Graduate Courses

**201. Seminar** (2)

A review, integration, and supplementation of the student's knowledge of psychology.

**205. Advanced Mental Testing** (3)

The theory of mental testing and a comprehensive survey of the various verbal and nonverbal individual mental tests. Prerequisites: Psychology 104A, 105A, 105B, and 151, or equivalents.

**211. Advanced Clinical Psychology** (3)

A seminar in psycho-diagnostics, counseling, and clinical research. Prerequisites: Psychology 151 and 152, or equivalents.

**233. Guidance Counseling Techniques** (3) I, II

Designed for school counselors. To stress the understandings and procedures necessary for effective interviewing. Prerequisite: Education 230, or equivalent. Not open to students with credit for Education 233.

**234. Projective Psychology** (3) I or II

Introduction to the theory and principles underlying use of projective techniques by clinical psychologists; a review of the structure and dynamics of personality as interpreted by projective devices. Prerequisites: Psychology 104A, 105A, 105B, and 151, or equivalents.

**235. The Rorschach Method** (3)

A seminar and practicum in basic administration and scoring of the Rorschach Test, with critical appraisal of the problems involved in estimations of reliability and validity of this technique. Prerequisites: Psychology 104A, 105A, 105B, 151, and 234, or equivalents.

. **Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliog-hies, preparatory to the writing of a master's project or thesis.

. **Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; be arranged with department chairman and instructor.

. **Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

# RECREATION
## IN THE DIVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

### Major

A *curriculum in recreation* is offered for the A.B. degree. For a description of this jor, refer to the Recreation Curriculum in the section of the catalog entitled: Pre-fessional and Occupational Curricula.

### Minor

A *minor in arts and sciences* is offered in *recreation.* The minor consists of 15 to units to include the following courses: lower division: two units of physical educa-activity courses; Physical Education 53; and two units chosen from Art 61B, fields of dance, drama, or music. Upper division requirements: Recreation 165, A-170B, and 184A or 184B. Recommended: Physical Education 151. Consultation h the chairman of the department is advised.

### Upper Division Courses

. **Administration of Community Recreation** (3) II
The principles of organization and promotion of leisure time and recreation ivities. Course content covers growth of the recreation movement, administration of as and facilities, program of activities, features, services, organization and adminis-tion problems. A required course for recreation minors.

**A-170B. Recreational Leadership** (2-2) Year, I
Principles and practices in recreational leadership. Methods of instruction and cial techniques in the activities of the recreation program. Attention to crafts, sic, social programs, drama, special projects, dance, sports, camp-craft and outdoor cation. Courses may be taken separately. Not open to students with credit for ysical Education 170A-170B.

**A-184B. Field Work in Recreation** (3-3) Year, I
Observation and participation in supervised group activities in the field. Practical erience in the various public and semi-public community recreation agencies.

. **Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of tructor.

### Graduate Courses

. **Problems in Recreation** (2) (Alternate years)
A survey of current problems facing the recreation profession, a review of rature, discussion of trends and observation of school situations together with the lysis and evaluation of actual problems. Written reports are required. Not open tudents with credit for Physical Education 204.

## ROMANCE LANGUAGES

### IN THE DIVISION OF LANGUAGES AND LITERATURE

#### Major

A *major in arts and sciences* is offered in *Romance languages* for the A.B. degre Courses in the major are in addition to 45 units in general education courses. Lowe division requirements: French 1, 2, 3, 4, 5, 6, and Spanish 1, 2, 3, 4, 5, 6. Recon mended: History 4A-4B or 8A-8B (for those who emphasize Spanish in the uppe division). Six units from courses 1, 2, 3, 4 in French or Spanish may be applie toward general education requirements. Upper division requirements: A minimu of 24 upper division units in French and Spanish including French or Spanish 19 At least nine units of upper division courses must be taken in each language. person majoring in Romance languages must have a minor to be decided upon i consultation with his major adviser.

A *teaching major in Romance languages* is offered for the junior high and ger eral secondary credentials. For specific information, refer to these credentials.

#### Minor

A *minor in arts and sciences* is not offered in Romance languages, but minors ma be taken in French or Spanish.

#### Graduate Courses

**290. Romance Language Bibliography (1) I**
Exercises in the use of basic reference books, journals, and specialized bibliogra phies in the field of the Romance languages. Prerequisite: Nine units of uppe division French or Spanish and graduate status.

## RUSSIAN

### IN THE DIVISION OF LANGUAGES AND LITERATURE

Major or minor work is not offered in Russian.

#### Lower Division Courses

**1. Elementary (3) I**
Pronunciation, oral practice, reading in Russian literature, minimum essential of grammar. Prerequisite: two years of high school (or one year of college) foreig language.

**2. Elementary (3) II**
Continuation of Russian 1. Prerequisite: Russian 1.

**3. Intermediate (3) I** (Not offered in 1953-54)
Reading in Russian of short stories, novels, or plays; oral practice. Prerequisite Russian 2 or equivalent.

**4. Intermediate (3) II** (Not offered in 1953-54)
Continuation of Russian 3. Outside reading and reports. Prerequisite: Russian or equivalent.

## SOCIAL SCIENCE

### IN THE DIVISION OF SOCIAL SCIENCES

#### Major

A *major in arts and sciences in social sciences* is offered for the A.B. degree Courses in the major are in addition to 45 units in general education courses. Lowe division requirements: Six units in each of three of the following fields, the selectio to be made on advise of the division adviser: (1) economics, (2) geography, (3) history, (4) political science, and (5) sociology-anthropology. Upper division requirements: A minimum of 30 units selected with the approval of the division adviser, as follows: Six to 15 units in each of three fields, provided that one of these fields be different from the fields selected for lower division work, and a 199 course. Twelve units in social science courses may be applied toward social science requirements in general education. Students majoring in social science are not required to complete a minor.

A *teaching major in social sciences* is offered for the general junior high school general secondary school credentials. For statement of requirements, refer to se credentials.

### Minor

A *minor in arts and sciences* is not offered in the social sciences.

A *teaching minor in social science* is offered for the general secondary, special ondary, general elementary, and kindergarten-primary credentials. For statement requirements, refer to these credentials.

### Lower Division Courses

**. Contemporary Problems** (3) I, II

A survey of political, social and economic forces with background material for lerstanding human problems.

## SOCIOLOGY

### IN THE DIVISION OF SOCIAL SCIENCES

### Major

A *major in arts and sciences,* is offered in *sociology* for the A.B. degree. Courses the major are in addition to 45 units in general education courses. Lower division uirements: Sociology 50 and 51. Upper division requirements: A minimum of 24 per division units in sociology, including Sociology 103, 110, 135, 152, 153, and 173 174. Students majoring in sociology are required to complete a minor.

A *teaching major* is not offered in sociology; however, courses in sociology may be d as part of the *social science major* for the general junior high school credential the general secondary credential. For specific information, refer to the outlines of uirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in sociology. The minor consists of 15 to units in sociology, nine units of which must be in courses carrying upper division dit.

A *teaching minor* is not offered in sociology for the general secondary credential; vever, courses in sociology may be used as part of the *social science minor* for the cial secondary, the general elementary, and the kindergarten-primary credentials. r specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**. Marriage and Family** (3) I, II

Emphasizes preparation for successful marital adjustment by presenting materials that will help students learn to solve their own courtship, marriage, and family blems. A general education course in social science and also in family life education. t open to students with credit for Sociology 135 or Home Economics 135.

**. Contemporary Social Problems** (3) I, II

Survey of modern social problems recognizing the sociological factors involved. phasis on the scientific method of approach. An evaluation of various causes and ations of problems. A prerequisite for upper division courses in Sociology. Sophore standing required.

**. Principles of Sociology** (3) I, II

The development and use of the concepts applied to sociological analysis; the cts of isolation and social contacts, interaction, processes, forces, controls, collective avior and social progress. A prerequisite for upper division courses in Sociology. homore standing required. Prerequisite: Sociology 50.

### Upper Division Courses

**. Elementary Social Statistics** (3) I, II

Analysis and presentation of elementary material in the fields of sociology and ial work. Tabular and graphic presentation, analysis of frequency distributions, ads, simple correlation, sampling and reliability techniques. Prerequisites: Mathetics A-B and Sociology 50 and 51. Mathematics C or 7A recommended. A prerequi- for most upper division sociology courses. Not open to students who have credit for nomics 140 or Psychology 104A or 104B.

*** 110. Race Relations (3) I**

A study of the Negro, Oriental, and other minority groups in the United Stat A study of mental capacities, education, cultural achievement, family life, delinquei and other social factors of each group. Race prejudice, racial consciousness, theories racial superiority and inferiority will be considered. Prerequisite: Sociology 50, 51.

**120. Industrial Sociology (3) II**

Analysis of group relationships within economic organizations. Problems leadership, morale and conflict. Some attention to the sociology of occupations and p fessions. Prerequisites: Sociology 50, 51.

*** 135. Marriage and the Family (3) I, II**

Preparation for marriage. Prediction scales for evaluating success or failure marriage. Parent-child relationships; factors in successful and unsuccessful marriag higher education and the birth rate; married women in industry and professions; des tion and divorce. Not open to students who have credit for Sociology 45, or Ho Economics 135.

*** 145. Social Psychology (3) I, II**

The major problems and findings concerning group behavior and group memb ship, the socialization of the individual, and processes of social interaction. Not op to students with credit for Psychology 145.

**152. History of Social Thought (3) I**

The origin and development of social theory in Europe and America; consid ation of the fields and specialization and research in contemporary American sociolo Prerequisite: Sociology 50, 51.

**153. Modern Social Theory (3) II**

A study of theories basic to modern sociological research, including the viewpoi of European and American thinkers. Prerequisites: Sociology 50, 51, and 152, permission of instructor.

**166. Honors Course (Credit to be arranged) I, II**

Refer to the Honors Program.

**170. Social Disorganization (3) I**

Survey of many alleged abnormal phenomena in society as seen in society tod in various forms of individual, family, community and world disorganization, such crime, prostitution, extreme alcoholism, migratory workers, divorce, revolution a war.

**173. Criminology and Penology (3) I**

The extent and characteristics of crime; consideration of physical, mental, e nomic, and sociological causes of crime; study of methods of penal discipline, pris labor, parole, and probation; programs of prevention. Prerequisite: Sociology 50 a 51, or permission of instructor.

**174. Juvenile Delinquency (3) II**

The nature and extent of delinquency; the causative factors involved; methods control and prevention, with special attention to the protective and remedial measu offered by the school, home, Juvenile Court, correctional institutions and camps, p bation and parole, and recreational agencies. Prerequisite: Sociology 50, 51, or perm sion of the instructor.

**176. Contemporary Correctional Administration (3) II**

A study of the problems encountered in administering modern correctional p grams, including juvenile and adult probation, courts and correctional institutio forestry and road camps, detention homes, and jails. Prerequisite: Sociology 173 or 1 or consent of instructor.

**180. Population Problems (3) I**

Problems of population increase, migration, shifts in composition of populati relative to age, sex, and racial distribution. Population practices and theories. Biolo ical and geographical aspects of population problems. International population mov ments. Prerequisite: Sociology 50, 51 and 103.

**. Community Welfare Organization (3) II**
An analysis of the structure and process of community organization for social lfare as well as the functional relationships between public and private welfare encies. Field work will be required to study some of the social agencies of San Diego. erequisite: Sociology 50, 51 and Sociology 103, or permission of instructor.

**. Urban Sociology (3) I, II**
A study of the structure and function of the modern city; types of neighborhoods; ms of recreation; social forces in a metropolitan area; types of urban personalities d groups; rural-urban conflicts of culture. Practical field studies required. Prerequise: Sociology 50, 51 and 103.

**. Fields of Social Work (3) I, II**
A survey of the nature of social work and the various kinds of social work which found in the modern urban life. The student is familiarized with the various social encies in the community, their problems and methods of work, by readings and field ps. Volunteer social work in some social agency recommended. Prerequisites: Socigy 50, 51, and 103.

**. Special Study (1-6) I, II**
Individual study. Six units maximum credit. Prerequisite: permission of tructor.

### Graduate Courses

**A-200B. Seminar (2-2)**

**. Principles of Social Case Work (3) I**
A study of the principles and practices of social case work; problems of case cording and analysis. Directed field work and case studies. Prerequisites: Sociology or Psychology 152 or Education 233.

**. Field Work in Social Case Work (3) II**
Supervised practice in local social work agencies. Prerequisite: Sociology 190 d 230.

**. Bibliography (1)**
Exercises in the use of basic reference books, journals, and specialized bibliogphies, preparatory to the writing of a master's project or thesis.

**. Special Study (1-6) I, II**
Individual study. Six units maximum credit. Prerequisite: permission of staff; be arranged with department chairman and instructor.

**. Thesis (3)**
Guidance in the preparation of a project or thesis for the master's degree.

## SPANISH

### IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *major in arts and sciences* is offered in *Spanish* for the A.B. degree. Courses the major are in addition to 45 units in general education courses. Lower division uirements: In the major, Spanish 1, 2, 3, 4, 5, 6; in other foreign languages, ench 1, 2, or German 1, 2, or Latin 1, 2. Six units in elementary French, German, Latin may also be applied toward general education requirements. Recommended: story 4A-4B or 8A-8B. Upper division requirements: A minimum of 24 upper ision units, at least 21 units of which must be in Spanish, including Spanish 198. e remaining three units may be selected from Anthropology 151B; Geography 118, , 120; History 161, 162; Political Science 165; Spanish 115 or 116; or Comparative erature 101A, 140A-140B, 152A-152B, 159, in consultation with the Chairman of Department. A person majoring in Spanish must have a minor to be decided upon consultation with his major adviser.

A *major in arts and sciences* is offered in *Romance languages*. For specific infortion, refer to Romance languages in the section on Announcement of Courses.

A *teaching major* is offered in Spanish or Romance languages for the junior high ool and general secondary credentials. For specific information, refer to these dentials.

## Minor

A *minor in arts and sciences* is offered in *Spanish*. The minor consists of 15 to units in Spanish, six units of which must be in courses carrying upper division cred

A *teaching minor* is offered in Spanish for the general secondary, the speci secondary, the general elementary, and the kindergarten-primary credentials. F specific information, refer to these credentials.

## Lower Division Courses

***1. Elementary (3) I, II**
Pronunciation, oral practice, readings on Hispanic culture and civilization, min mum essentials of grammar.

***2. Elementary (3) I, II**
Continuation of Spanish 1. Prerequisite: Spanish 1 or one year of high scho Spanish.

***3. Intermediate (3) I, II**
Reading in Spanish of cultural material, short stories, novels or plays; or practice; outside reading with oral and written reports. Prerequisite: Spanish 2 two years of high school Spanish.

***4. Intermediate (3) II**
Continuation of Spanish 3. Prerequisite: Spanish 3 or three years of high scho Spanish.

**5. Intermediate (2) I, II**
A practical application of the fundamental principles of grammar by means oral and written work based on Spanish texts. Prerequisite: Spanish 2 or two yea of high school Spanish.

**6. Intermediate (2) II**
Continuation of Spanish 5. Prerequisite: Spanish 5 or three years of high scho Spanish.

**10. Conversation (2) I**
Practice in the spoken language; practical vocabulary; conversation on assign topics; simple dialogues and plays. Prerequisite: Spanish 2 or two years of high scho Spanish.

**11. Conversation (2) II**
Continuation of Spanish 10. Prerequisite: Spanish 10, or Spanish 3, or thr years of high school Spanish.

***15. Spanish Civilization (2) I**
The major currents and characteristics of Hispanic life and culture, as express through the centuries in literature, art, philosophy, music and science. Conducted English. No prerequisite.

***16. Spanish Civilization (2) II**
Continuation of Spanish 15 with emphasis on Spanish America. No prerequisit

**50. Spanish Commercial Correspondence (3) I**
A one-semester intermediate course in Spanish composition, directed along t line of commercial correspondence. A practical course, with translation of busine letters, and supplementary reading in Spanish on commercial subjects. Prerequisit Three years of high school Spanish, or completion of Spanish 3 or 5.

## Upper Division Courses

**101A-101B. Conversation and Composition (3-3) Year, I**
Translation into Spanish of moderately difficult English prose passages. Fr composition in Spanish. Outside reading of modern Spanish plays, with writte reports in Spanish. Oral practice in colloquial Spanish with extensive use of phon graph recordings. Prerequisite: Spanish 4 and 6, or their equivalent, with a grade of or permission of instructor.

**02A-102B. Introduction to Spanish Classics** (3-3) Year, I (Offered in 1955-56)
Reading from several types of classical literature. Lazarillo de Tormes and ther novels of Roguery; selections from Don Quixote, and the Cien Mejores Poesias astellanas; one drama each from the works of Lope de Vega, Calderon, Alarcon, ıd Moreto; collateral reading and reports. Prerequisite: Spanish 4 and 6, or their uivalent, with a grade of C.

**04A-104B. Spanish-American Literature** (3-3) Year, I (Offered in 1954-55)
Reading from representative Spanish-American authors during the colonial, volutionary and modern periods. Lectures, class reading, collateral reading and ports. Prerequisite: Spanish 4 and 6, or their equivalent, with a grade of C.

**05A-106B. Modern Spanish Drama** (3-3) Year, I
The development of the drama of Spain from the beginning of the nineteenth ntury to the present time. Prerequisite: Spanish 4 and 6, or their equivalent, with grade of C.

**0A-110B. Novel and Short Story in Spain** (3-3) Year, I (Offered in 1954-55)
The development of the novel and short story in Spain from 1830 to the resent time. Prerequisite: Spanish 4 and 6, or their equivalent, with a grade of C.

**115. Spanish Civilization** (2) I
An advanced course in Hispanic culture of the past and present, with emphasis ı the arts, philosophy, and literature. Lectures, class discussions, outside readings, ritten reports on individual topics. Conducted in English. Prerequisite: sophomore anding.

**116. Spanish Civilization** (2) II
Continuation of Spanish 115 with emphasis on Spanish America. Prerequisite: phomore standing.

**0. Spanish Phonetics** (3) II
A theoretical and practical study of Spanish phonetics. A study of vowels, consonants, isolated words, and phonic groups. The principles of versification, and exercises intonation. Especially recommended for prospective teachers of Spanish. Prerequites: Spanish 4 and 6, or their equivalent, with a grade of C.

**6. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**8. Comprehensive Reading and Survey Course** (3) II
Designed to fill up the gaps in the reading done in courses. Class meeting once week for guidance, reports, and quizzes. Required of all seniors majoring in Spanish.

**9. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of structor.

## Graduate Courses

**1. Old Spanish** (2) I
A study of the language and literature of Spain from the 12th to the 15th cenries. Prerequisite: Nine units of upper division Spanish and graduate status.

**4. Seminar in Spanish-American Literature** (2) II
Intensive investigation of some phase of Spanish-American literature. A single untry, an author, or some special problem will be studied and reported upon. Prequisite: Nine units of upper division Spanish and graduate status.

**0. Bibliography** (1) See Romance Languages

**8. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff, be arranged with department chairman and instructor.

**9. Thesis** (3)
Master's degree candidates in Spanish are expected to substitute a comprehensive amination for the thesis. In unusual cases a student may write a thesis with the rmission of the department.

# SPEECH ARTS

## IN THE DIVISION OF LANGUAGE AND LITERATURE

### Major

A *major in arts and sciences* is offered in *speech arts* for the A.B. degree. Cours in the major are in addition to 45 units in general education courses. Lower divisio Required in general education: Speech Arts 3. Required in the major: a minimum 13 units of lower division courses in speech arts, specializing in the fields of dramat art, radio, public speaking, or a guided combination of the three. Upper division requir ments: A minimum of 24 upper division units, including Speech Arts 150, with a emphasis of 12 units in one area of concentration (theater, radio, public speakin or speech pathology). A minor is suggested, but not required.

A *teaching major in speech arts* is offered for the general secondary credenti and the special secondary credential in speech arts; and for the special seconda credential in correction of speech defects.

### Minor

A *minor in arts and sciences* is offered in *speech arts*. The minor consists of 15 22 units in speech arts, nine units of which must be in courses carrying upp division credit.

A *teaching minor in speech arts* is offered for the general secondary, special se ondary, general elementary, and kindergarten-primary credentials. For statement requirements, refer to these credentials.

### Lower Division Courses

**1. Voice and Diction** (3) II
Exercises and drills to improve the quality, flexibility and effectiveness of t speaking voice leading to good usage in standard American speech. Preparatory further courses in public speaking and dramatic art.

**2. Oral Communication Laboratory** (1) I, II
Those who fail the speech test must take this course concurrently with Speec Arts 3. This course provides training in articulation, voice control, vocabulary. Ind vidual laboratory assistance on specific speech problems.

***3. Oral Communication** (2) I, II
Training in fundamental processes of oral expression; method of obtaining an organizing material; outlining principles of attention and delivery; practice in co struction and delivery of various forms of speeches.

**4. Extemporaneous Speaking** (3) I, II
Practice in extemporaneous speaking on subjects of current interest, both nation and local, with stress laid on the organization and delivery of content material. Foru discussion will provide speakers with the opportunity of assembling facts quickly meet such questions as any audience situation might demand.

**11A. Fundamentals of Interpretation** (3) I, II
Application of the principles involved in "making words come alive": Respon to thought and mood, sensory association, emphasis, climax. Practice selections i poetry and prose.

**11B. Intermediate Interpretation** (3) I, II
Oral reading of various types of material suitable for popular audiences Stories, humorous sketches, light and sentimental verse. Prerequisite: 11A or 55

**54. Stage Make-Up** (2) I
Practice in the application of stage make-up including straight and characte Two laboratory periods per week.

**55A. Elementary Acting** (3) I, II
Speech and pantomime applied to the problems of characterization in grou scenes. This course is concerned with the discovery and development of talent and th appreciation of the actors' problems for directors and teachers. (32 laboratory hour required.)

**55B. Intermediate Acting** (3) I, II
Continuation of 55A emphasizing more emotional material from longer scenes. Some one-act plays will be produced from this class. (32 laboratory hours required.) Prerequisite: 55A or previous training.

**56A-56B. Dramatic Production** (3-3) Year, I
A general survey of play production planned to present the whole organization of the college and school theater, with emphasis on backstage practice, stagecraft, and elementary lighting. Crews for the departmental productions are organized in this class. Prerequisite: 55A or permission of the instructor is prerequisite for 56B.

**57. Elementary Stage Costume** (3) II
A study of pattern drafting, draping, color harmony and the use of fabrics for stage costuming. Students will receive practical training in the construction of stage costumes. Two lecture-demonstration and recitation hours and one laboratory per week.

**60A-60B. Argumentation and Debate** (3-3) Year, I, II
Obtaining and organizing of evidence and the construction and use of the brief; study and discussion of current issues; the presentation of formal and informal debates. Attention to intramural and intercollegiate debating.

**61A-61B-61C-61D. Intercollegiate Debate** (1-1-1-1) I, II
Students are limited to four units, including lower and upper division courses.

**63A-63B-63C-63D. Verse Choir** (1-1-1-1) I, II
Participation in verse speaking chorus to develop quality, range of tone, and ability in dramatic visualization of poetry. Students are limited to four units, including lower and upper division courses.

**81. Survey of Radio** (3) I, II
A course presenting the background, theory, and fundamentals of radio broadcasting. The subject material includes history of broadcasting; types of radio programs; broadcast operation.

**82. Radio Announcing** (3) I
The fundamentals of radio announcing. Class time will be divided between lecture and laboratory practice of announcing styles. Voice training for radio will be stressed. Prerequisite: Speech Arts 81.

**83. Radio Acting and Directing** (3) II
For students interested in the production of dramatic radio programs. Lecture and laboratory for radio techniques in characterization. The use of sound effects and music cues and bridges will be considered. Emphasis will be on production analysis. Actors for Radio Guild productions will be taken from this class. Prerequisite: Speech Arts 81.

### Upper Division Courses

**108. Advanced Interpretation** (3) I, II
Analysis of techniques of literary composition as guides to oral interpretation. Achievements of the creative artist as they affect the interpretative artist. Prerequisite: 11A or 11B or permission of instructor.

**118A. Play Analysis** (3) I
Deals with the one-act play and its technique. New plays are read and discussed in class during their period of development.

**118B. Playwriting** (3) II
Analyses of long plays. Students engage in creative writing.

**120. Readings in Dramatic Art** (3) II
This course will deal with dramatic materials in which the student will study complete plays for interpretation and characterization without memorization and acting techniques.

**140A-140B. Stage Design** (3-3) Year, I, II
The application of the principles of design, color and perspective to the design of settings for the production of period and modern plays. Students will learn to make sketches and models and paint the scenery for the departmental productions. Prerequisite: 56A-56B or permission of the instructor.

**142A-142B. Summer Theater Workshop** (3 or 6) Summer
A theater laboratory for those who wish to devote their entire time to trainin and a variety of experiences in the summer theater program including acting, design stagecraft, lighting, directing, and stage management. Prerequisite: Permission of th instructor.

**145. Stage Lighting** (3) II
For directors, designers and technicians in school and community theaters concerning the principles and practice of light, color, lighting instruments, and contro equipment, including the design and planning of lighting of plays. Students will serv as light crews for departmental production.

**150. Phonetics** (3) I, II
Auditory and kinesthetic analysis of the sounds of the English language. Valuable as a corrective course in pronunciation and articulation. Required of speech major and those seeking the Speech Correction Credential.

**152. History and Design of Costume** (stage) (3) II
A study of costume from Egypt to the present. Emphasis on the use of historica costumes on the stage. Costume designs for one stage production. Drawing and painting experience desirable but not necessary.

**154A-154B. History of the Theater** (3-3) Year, I, II
A study of the theater from primitive times to the present. Special attention wil be given to the theater as a mirror of the social and cultural background of the variou countries and periods in which it is studied. Carries aesthetics credit. (Speech Art 154B may be taken without 154A.)

**155. Advanced Acting** (3) I
Problems in characterization: Acting styles of the Elizabethan and Eighteenth Century periods. Prerequisite: 55A-55B or the equivalent.

**156. Advanced Dramatic Production** (3) II
Problems and projects in scenery and lighting in connection with the workshop and major productions of the department.

**159. Stage Direction** (3) I
Planned for prospective directors of plays in schools, colleges and community theaters. Through lectures, discussions, and exercise projects the student will become acquainted with the principles, procedure and methods of stage direction. Each student will be required to direct several short plays during the course.

**160. Stage Direction Laboratory** (1) I, II
This will consist of experience in directing a one-act play before a departmental or public audience. It may be taken with or it may be preceded by 159. Prerequisite or corequisite: 159. May be repeated once for credit.

**161A-161B-161C-161D. Advanced Intercollegiate Debate** (1-1-1-1) I, II
Students are limited to four units, including lower and upper division courses.

**162. Advanced Argumentation** (3) I
Presents a further and more detailed study in the preparation of briefs and the organizing of evidence; opportunity for participation in intramural debates, intercollegiate debate, and community speaking activity. Prerequisite: 2A or 2B.

**163A-163B-163C-163D. Advanced Verse Choir** (1-1-1-1) I, II
Participation in verse speaking chorus to develop quality, range of tone, and ability in dramatic visualization of poetry. Students are limited to four units, including lower and upper division courses.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**176. Problems of Speech Correction and Articulation** (3) II
Analysis and discussion of the major articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. (Minimum of 25 laboratory hours required.) Not open to students with credit for Education 176.

**177. The Teaching of Lip Reading (2)**

History, theory and methods of lip reading. Aids for the classroom teacher; program and materials of instruction for the specialized teacher. Opportunities for practice teaching are offered. Not open to students with credit for Education 177.

**179A-179B. Nervous Speech Disorders (3-3) Year, I**

Clinical survey of newest methods of speech correction with special emphasis given to stuttering. (Minimum of 25 laboratory hours required per semester.) Required course for Special Corrective Credential. Not open to students with credit in Education 179A-179B. (Speech Arts 179A is a prerequisite for 179B.)

**180A-180B. Rehearsal and Performance (1) I, II**

One unit of technical practice followed by one unit of acting. One unit may be repeated, making a total of three units.

**181. Radio Sales and Advertising (3) I, II**

A study of advertising trends in radio advertising; time buying, audience survey, and program types in relation to products to be advertised via radio broadcasting. Includes publicity and promotion of radio programming organization of a radio station; relationship between the business and entertainment factors of radio broadcasting. Open to students with consent of instructor. Not open to students with credit for Business 181.

**182. Advanced Radio Production (3) II (Offered in 1951-52 and alternate years)**

Advanced radio production techniques. Students are responsible for the execution of Radio Guild productions. Projects in program types include the use of sound and music. Material includes production analyses and script editing. Prerequisite: Speech Arts 83.

**183. Radio Continuity and News Writing (3) II**

Correlates news editing and writing with announcing styles. Radio news procedure and organization of a radio news staff; analysis of reportorial and commentary styles. Includes production techniques of "on-the-spot" and multiple point pickup broadcasts. Registration with permission of instructor. Not open to students with credit for Journalism 183.

**184. Radio Writing (3) II**

Includes original half-hour scripts, play or novel adaptations for radio, and the documentary program. Study of pacing and timing, the use of sound and music for bridges and cues, and radio format. Plays written by students are read and discussed during their development; the better plays to be produced by the Radio Guild for broadcast. Open to students with consent of instructor.

**191. Organized Discussion (3) II**

Consideration of the symposium, the panel, the open forum, the business session, and varieties of conference speaking. Emphasis upon organization and presentation. Attention to parliamentary procedure for informal groups. Prerequisite: Speech Arts 60 or equivalent.

**192A-192B. Advanced Public Speaking (3-3) Year, I, II**

Careful attention given to the preparation and delivery of longer speeches, using as models classics in the field of oratory. Prerequisite: 4.

**199. Special Study (1-6) I, II**

Individual study. Six units maximum credit. Prerequisite: permission of instructor.

## Graduate Courses

**200. Seminar in History of Oratory (2) II**

An advanced course for those already familiar with the techniques and theories of public speaking and debate. A history of public address from the time of Greece up to the present, organized around the theories of representative orators and their relationships to the social environment.

**221. Articulatory Problems of Speech (2) I**

Analysis and discussion of articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Prerequisite: Speech Arts 150.

**245. Seminar in Technical Practice (2)**
Advanced technical projects in planning school theaters and their mechnical equipment, lighting control and lighting instruments and the design of lighting layouts for elaborate plays will be assigned, executed and discussed.

**259. Seminar in Stage Direction (2)**
An advanced course for those who are ready to direct full-length plays and to consider the problems of handling various styles and types of drama in the great periods of dramatic literature for modern production. For graduates with experience in directing plays.

**260. Seminar in Oral Interpretation (2)**
Aesthetic discipline applied to oral reading of masterpieces of poetry and prose. Analysis of thought and emotional content and aesthetic form, including unity and harmony, variety and contrast, balance and proportion, rhythm.

**298. Special Study (1-6) I, II**
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

## ZOOLOGY

### IN THE DIVISION OF LIFE SCIENCES

### Major

A *major in arts and sciences* is offered in *zoology* for the A.B. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: in the major, Zoology 1A-1B; in related fields, Botany 1 or 2A-2B, Chemistry 1A-1B or 2A-2B, Physics 2A-2B, 3A-3B. Upper division requirements: 24 units in zoology to include Zoology 100, 101, 106, 155. A minor is not required. Reading knowledge of a foreign language is recommended.

A *major in arts and sciences* is offered in *zoology* for the B.S. degree. Courses in the major are in addition to 45 units in general education courses. Lower division requirements: in the major, Zoology 1A-1B; in related fields, Botany 1 or 2A-2B, Chemistry 1A-1B or 2A-2B, Physics 2A-2B, 3A-3B, Geology 2, 3, and Mathematics 7A-7B. Upper division requirements: 36 units in zoology or approved related fields to include Zoology 100, 101, 106, 155. A minor is not required. Reading knowledge of a foreign language is recommended.

Nine units in physical science and life science may be applied toward general education requirements in the natural sciences.

A *teaching major* is not offered in zoology; however, courses in zoology may be used as part of the *life science major* for the general secondary credential or as part of the *general science major* for the general junior high school credential. For specific information, refer to the outlines of requirements for these credentials.

### Minor

A *minor in arts and sciences* is offered in zoology. The minor constists of 15 to 22 units in zoology, six units of which must be in courses carrying upper division credit.

A *teaching minor* is not offered in zoology; however, it may be used as part of the *teaching minor in life science* for the general secondary credential, or as part of the *teaching minor in general science* for the special secondary, the general elementary, and the kindergarten-primary credentials. For specific information, refer to the outlines of requirements for these credentials.

### Lower Division Courses

**1A-1B. General Zoology (4-4) Year, I, II**
An introduction to animal biology. Designed for those who expect to do advanced work. Two lectures and 6 hours of laboratory work each week. Prerequisite for Zoology 1B; Zoology 1A.

**8. Human Anatomy (3) I**
A study of human structure through the use of models, prepared dissections and microscope slides. Prerequisite: High school biology, Biology 3, 1, or Zoology 1A. Two hours of lecture and three hours of laboratory per week. Required of prenursing students. Credit reduced to 2 units if student has credit for Zoology 20.

**20. Human Anatomy and Physiology (3) II**

An elementary course in human anatomy and physiology. Prerequisite: High school biology, or Biology 1 or 3 or Zoology 1A. Lectures three hours per week. Credit reduced to two units if student has credit for Zoology 8 or Physiology 1A.

## Upper Division Courses

**100. Embryology (4) I, II**

The development of vertebrates as illustrated by the frog, chick, and pig. Six hours of laboratory and two hours of lecture and quiz per week. Prerequisite: Zoology 1B, or Biology 3 and consent of instructor.

**101. General Physiology (4) II**

Fundamentals of plant and animal functions. Two lectures and six hours of laboratory per week. Prerequisites: Biology 3 and consent of instructor, or Zoology 1A-1B, Chemistry 1A-1B or Chemistry 2A-2B. Not open to students with credit for Physiology 101.

**104. Microtechnique (3) I, II**

Introduction to methods of preparation of tissues for microscopic study. Six hours of laboratory and one hour of lecture per week. Prerequisite: One year college chemistry and Zoology 1A-1B, Botany 2A-2B, or Biology 4 and consent of instructor.

**106. Comparative Anatomy of the Vertebrates (4) I**

Dissection, study and comparison of organ systems of typical vertebrates. Two hours per week of lecture and six hours of laboratory. Prerequisite: Zoology 1B, or Biology 3 and consent of instructor.

**108. Histology (4) I**

A study of the microscopic structures and differentiation of tissues and organs of the vertebrates, especially mammals. Two lectures and six hours of laboratory per week. Prerequisites: Zoology 1A-1B; recommended Zoology 100.

**109. Hematology (3) I, II**

Microscopic and chemical examination of blood. One lecture and six hours of laboratory per week.

**110. Limnology (4) II**

A biological survey of available fresh waters, followed by a selected problem on the relationship of an organism or group of organisms to the environment. Two lectures and six hours of laboratory or field work per week. Prerequisites: Zoology 1A-1B and elementary chemistry.

**112. Marine Invertebrates (4) I**

Identification and study of behavior and life histories of invertebrates of the San Diego region. Frequent collecting trips to the beaches required. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor. Two hours of lecture and six hours of laboratory or field work per week.

**113. Ornithology (4) II**

The study and identification of birds, especially those of the Pacific Coast and the San Diego region. One hour of lecture and six hours per week of laboratory, or field excursions, and a field project. Prerequisite: Zoology 1B, or Biology 4 and consent of instructor.

**113F. Field Ornithology (1) I**

A field study of local birds with special emphasis upon the fall migration.

**115. Cold-blooded Vertebrates (3) II**

The classification, natural history and distribution of fishes, amphibians, and reptiles. Practice in the techniques of collection and the use of keys for identification. Frequent field trips. One lecture and six hours of laboratory per week. Prerequisites: Zoology 1B, or Biology 4 and consent of instructor.

**118. Mammalogy (3) II**

Lectures on classification, adaptations, and ecological relationships of mammals. Laboratory and frequent field trips to familiarize students with local mammals, taxonomic procedures and field techniques. One lecture and six hours of laboratory per week. Prerequisites: Zoology 1A, or Biology 4 and consent of instructor.

**119. Field Zoology** (4) I, Summer
Designed to give a working knowledge of the animals of Southern California; field trips, lectures and laboratory emphasizing ecology, behavior, observational methods, collecting techniques and taxonomy. Two hours of lecture and six hours of laboratory or field work per week. Prerequisite: A course in college biological science or permission of instructor.

**121. General Entomology** (3) I
The classification, life history, structure, and physiology of insects. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor. Two hours of lecture and three hours of laboratory per week.

**122. Systematic Entomology** (3) II
Intensive study of the classification of insects with special emphasis on a group of the student's choice. One hour of lecture, six hours of laboratory per week. Prerequisite: Zoology 121 or permission of instructor.

**125. Economic Entomology** (4) II
Course designed for students of agriculture and horticulture. Emphasis is placed on determination and control of insects affecting plants. Quarantine measures are also studied. Two lectures and two laboratory periods per week. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor.

**126. Medical Entomology** (3) I
The role of insects and other arthropods in transmission and causation of human diseases. Three hours of laboratory and two hours of lecture per week. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor.

**128. Parasitology** (4) I
Study of animal parasites with special reference to those of man. Laboratory including identification of important parasites of man, and collection and preservation of local forms. Two hours of lecture and six hours of laboratory per week. Prerequisite: Zoology 1A-1B, or Biology 4 and consent of instructor.

*** 150. Readings in Biology** (2) II
Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles, ecology, economic zoology, zoogeography, breeding habits, animal behavior. Not open to students who have credit for Botany 150. Prerequisite: Biology 3 or equivalent.

**153. Economic Biology** (2) I
Study of uses of plants and animals to man and their destructive effects. Consideration also given to general methods of control and conservation. Prerequisite: Zoology 1A, or Biology 4 and consent of instructor. Not open to students who have credit for Botany 153.

**155. Genetics** (3) II
Principles of plant and animal genetics, with experiments and demonstrations illustrating the mechanisms of heredity. Two hours of lecture and three hours of laboratory per week. Not open to students with credit for Botany 155. Prerequisites: Zoology 1A-1B, or Botany 2A-2B, or Biology 3 and consent of instructor.

**158. Conservation of Wildlife** (3) II
A survey of plant and animal resources with emphasis on their conservation and intelligent use. Prerequisite: a college course in biology or consent of the instructor. Not open to students with credit for Botany 158.

*** 160. Evolution** (2) II
The development of theories of evolution. Two lectures per week. Prerequisite: Biology 1 or equivalent. Not open to students with credit for Botany 160.

*** 165. Human Heredity** (2) I
Presentation of selected principles of heredity as related primarily to human inheritance. Designed primarily for nonscience majors. Two lectures per week. Not open to students with credit for Zoology 155 or Botany 155.

**166. Honors Course** (Credit to be arranged) I, II
Refer to the Honors Program.

**199. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisites: 15 units in zoology with a grade of A or B; permission of instructor.

### Graduate Courses

**200. Seminar** (3) I
Especial emphasis will be placed on current concepts in the various fields of biology including problems of migration, distribution, speciation, evolution. Required of all graduate students.

**202. Hydrobiology** (2) II
A course in aquatic ecology with special emphasis on fresh water but with reference to marine biology.

**213. Advanced Studies in Ornithology** (2) I
Lectures and seminar on advanced problems of morphology, distribution, behavior and classification of birds.

**290. Bibliography** (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**298. Special Study** (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

**299. Thesis** (3)
Guidance in the preparation of a project or thesis for the master's degree.

# DIRECTORY

## 1952-53

LOVE, MALCOLM A. (1952)----President
A.B., Simpson College; M.A., Ph.D., University of Iowa; LL.D., Simpson College.

ACKLEY, JOHN W. (1947)----Associate Professor of Speech Arts
A.B., University of Redlands; M.A., Ph.D., University of Southern California.

ADAMS, EILEEN (Mrs. Bert) (1949)----Junior Librarian
A.B., Willamette University; B.S. in L.S., University of Denver.

ADAMS, JOHN R. (1928)----Chairman, Division of Languages and Literature; Professor of English
A.B., A.M., University of Michigan; Ph.D., University of Southern California.

ALCORN, MARVIN D. (1941)----Professor of Education
A.B., Southwestern College; A.M., Teachers College, Columbia University; Ed.D., University of Southern California.

AMSDEN, GEORGIA C. (1925)----Associate Professor of Secretarial Management
Diploma, Gregg College, Chicago; special secretarial training in various colleges.

ANDERSON, GRAYDON K. (1949)----Assistant Professor of Economics
A.B., Willamette University; Ph.D., University of Wisconsin.

ANDREWS, JULIA G. (Mrs. F. S.) (1947)----Assistant Professor of Art
A.B., Northwestern University; M.A., Columbia University; two and one-half years of graduate study at Teachers College, Columbia University.

APPLE, JOE A. (1947)----Professor of Education
A.B., Southeastern State College; M.A., University of Oklahoma; Ed.D., Teachers College, Columbia University.

ATKINSON, DAVID F. (1949)----Instructor in Accounting and Business Management
A.B., San Jose State College; M.A., Stanford University; graduate study at Redlands University. On military leave, January, 1951.

BACON, GUINIVERE KOTTER (Mrs. George) (1928)
Associate Professor of Education
B.S., Utah Agricultural College; M.A., Stanford University; one year of graduate study.

BAKER, CLIFFORD H., JR. (1937)----Assistant Professor of Spanish
A.B., San Diego State College; M.A., and four years of graduate study at the University of California.

BAKER, DOUGLAS L. (1952)----Assistant Professor of Education
A.B., Lynchburg College; M.S., Ed.D., University of Southern California.

BALLANTINE, FRANCIS A. (1949)----Assistant Professor of Education
A.B., Michigan State Normal College; A.M., Ph.D., University of Michigan.

BARNHART, KENNETH EDWIN (1939)----Professor of Sociology
A.B., Southwestern University; B.D., Southern Methodist University; Ph.D., University of Chicago.

BECK, FOY H. (1951)----Assistant Professor of Education
B.A., Iowa State Teachers College; M.A., Colorado State College of Education; graduate study at Universities of Iowa and Southern California.

BECKER, CALLIE D. (Mrs. E. J.) (1946)----Senior Librarian
A.B., Shorter College; A.B. in L.S., Emory University.

BENTON, CARL W. (1948)----Instructor in Physical Education
B.S., University of California at Los Angeles; M.S., University of Southern California.

BIGGER, WILLIAM R. (1952)----Assistant Professor of Political Science
B.A., M.A., University of Wisconsin; graduate study at University of California at Los Angeles.

BILTERMAN, KATHRYN S. (Mrs. H. L.) (1952)----Assistant Professor of Education
B.S., University of New Mexico; M.A., Ph.D., University of Iowa.

* BIRCH, AILEEN J. (Mrs. C. E.) (1949)----Instructor in Education
A.B., San Diego State College; graduate study at Claremont College.

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* On leave.

BLOCK, EDWARD A. (1946)------------------------Associate Professor of English
A.B., M.A., Ph. D., University of California.

BRITTAN, MARTIN R. (1950)----------------------Assistant Professor of Zoology
A.B., San Jose State College; Ph.D., Stanford University.

BROADBENT, HARRY H. (1949)----------Assistant Professor of Physical Education
A.B., University of Oklahoma; M.S., University of Pennsylvania.

BROOKS, BAYLOR (1931)--------------------------Assistant Professor of Geology
B.A., Stanford University. Two years graduate study at University of Arizona and Stanford University.

BROWN, ELIZABETH McPIKE (Mrs. L. P.) (1926)------------Professor of French
Ph.B., M.A., Ph.D., University of Chicago; one year graduate study at the Sorbonne, Paris, France; Certificat d'Etudes Françaises; Diplõme de l'Association Générale de Phonétique, Paris, France; Officier d'Académie.

BROWN, EUGENE P. (1947)-------------------Associate Professor of Accounting
B.S., Southeastern Teachers College; B.A.,M.A., University of Oklahoma. Two years graduate study at University of Chicago, University of Southern California and University of Mexico.

BROWN, LESLIE PARKER (1922)----------------Professor of Spanish and French
B.A., Yale College; M.A., Harvard University; Ph.D., University of Southern California.

BRUBECK, HOWARD R. (1950)----------------------Associate Professor of Music
B.A., San Francisco State College; M.A., Mills College.

BRUNER, WILLIAM S. (1948)----------------------Assistant Professor of English
B.S., University of Virginia; M.A., Claremont College.

* BRYDEGAARD, MARGUERITE A. (Mrs. H.) (1936)---------Associate Professor of Education
A.B., San Diego State College; M.A. and graduate study at Claremont College.

BURNETT, GAIL A. (1947, except 1951-52)----------Assistant Professor of English
A.B., Randolph-Macon Woman's College; M.A., University of California at Los Angeles; Ph.D., University of Southern California.

CADE, C. MARSHALL (1951)----------------------------Lecturer in Engineering
B.S., Michigan Agricultural College; M.A., Michigan State College. Licensed Engineer in Civil Engineering.

CAMERON, ROY ERNEST (1929)-------------------------Professor of Economics
A.B., Ph.D., University of California.

CAMPBELL, LOIS B. (1947)----------------------Assistant Professor of Education
A.B., University of California; M.A., Teachers College, Columbia University.

CARLSON, HILDING B. (1948)
Coordinator, Personnel Services; Professor of Psychology
Ph.B., M.S., Ph.D., University of Chicago.

CARLSON, THORSTEN R. (1948)
Principal of Campus Laboratory School; Professor of Education
B.E., St. Cloud State Teachers College; M.A., Ph.D., University of Minnesota.

CAVE, MARY F. (1946)------------------Assistant Professor of Physical Education
B.S., University of North Dakota. Graduate study at Bennington College and University of California at Los Angeles.

CHADWICK, LEONARD E. (1949)----------------Assistant Professor of Economics
B.S. and two and one-half years graduate study at the University of California.

CORBETT, Katherine E. (1921)---------------------Associate Professor of Education
B.Pd., Michigan State Normal College; B.S., A.M., Teachers College, Columbia University.

* CROUCH, JAMES ENSIGN (1932)----------------------------Professor of Zoology
B.S., M.S., Cornell University; Ph.D., University of Southern California.

CUNKLE, ELIZABETH C. (Mrs. L.) (1948)-------------------------Junior Librarian
A.B., University of California; B.S. in L.S., Columbia University. Graduate study University of California.

CUNNINGHAM, CORNELIUS C. (1947)--------------------Professor of Speech Arts
A.B., Beloit College; M.A., Northwestern University; Ph.D., University of Iowa.

DEBRECHT, EUGENE F. (1949)
Coordinator of Extension Services; Assistant Professor of Marketing
A.B., San Francisco State College; M.A., Stanford University. On military leave, April, 1951.

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* On leave Semester I.

DEPUTY, ERBY CHESTER (1931)--------------------------Professor of Education
A.B., University of Denver; A.M., Ph.D., Columbia University.

DAVIS, GUY P. (1953)--------------------------Lecturer in Education
B.S., Teachers College, Columbia University; Ed.M., Ed.D., Harvard University.

DIRKS, JOHN H. (1947)--------------------------Assistant Professor of Art
A.B., San Diego State College. Graduate study at University of Southern California.

DORRIS, HELEN L. (1952)----------------Assistant Professor of Home Economics
B.S., Southern Illinois University; M.S., University of Illinois.

EAGLE, JOHN E. (1946)--------------------------Professor of Mathematics
B.S., Montana State College; M.A., Ed.D., Stanford University.

EARNEST, SUE W. (Mrs. L. E.) (1947)----------Associate Professor of Speech Arts
A.B., San Diego State College; M.A., Ph.D., University of Southern California.

EMERSON, ARTHUR T. (1952)----------------Assistant Professor of Mathematics
B.S., U. S. Naval Academy; one year graduate study at Naval War College.

EVENSON, PATTEE E. (1949)------------------------Associate Professor of Music
B.S., University of Minnesota; M.M., University of Michigan; specialized training at Universities of Minnesota, Michigan, Southern California, and Eastman School of Music; private instruction in Paris, London and the United States.

FLYE, RICHARD C. (1950)--------------------------Assistant Professor of Music
B.A., University of Virginia; M.A., and Professional Diploma, Columbia University.

FOX, DOROTHEA B. (1951)--------------------------------------Junior Librarian
B.A., San Diego State College; B.S. in L.S., M.A., University of Southern California; graduate study at University of New Mexico.

FRIEDRICH, KURT (1949)------------------------Assistant Professor of Education
A.B., Columbia College; M.A., Columbia University; Ed.D., Columbia Teachers College.

GALLUP, AVERY H. (1952)--------------------Assistant Professor of Zoology
A.B., San Diego State College; M.A., Claremont Graduate School; Ph.D., University of Michigan.

GANDERUP, JANIE F. (Mrs. M. T.) (1953)--------------------Lecturer in Education
A.B., San Diego State College.

GELDREICH, EDWARD W. (1947)----------------Assistant Professor of Psychology
A.B., M.A., University of Cincinnati; Ph.D., University of Chicago.

GENERALES, MINOS D. (1949)------------Associate Professor of Political Science
Degree in Law and Political Science, including six years of graduate study at the University of Athens, University of Paris Law School, and Institute of International Studies.

GERMANN, LULA (1926)----------------------------------------Senior Librarian
B.S., State Teachers College, Hays, Kansas.

GIBSON, ERNEST DANA (1947)------------------Professor of Business Education
Secretarial and Office Management
B.S., University of Minnesota; M.A., Colorado State College of Education; Ed.D., New York University.

GJERDE, CLAYTON M. (1948)------------------Associate Professor of Education
A.B., Augsburg College; M.A., Ph.D., University of Minnesota.

GRISIER, DONALD W. (1951)------------------Assistant Professor of Education
B.S., Bowling Green State University; M.A., Ed.D., Teachers College, Columbia University.

GULICK, SIDNEY L., JR. (1945)------------------------------Professor of English
B.A., M.A., Oberlin College; Ph.D., Yale University.

HAMMACK, ISABELLA STEWART (1936)--------Associate Professor of Education
A.B., M.A., and one year graduate study at the University of California.

HARRINGTON, AWONA B. (1949)--------------------------------Junior Librarian
A.B. and one year graduate study at San Diego State College; M.S. in L.S., University of Southern California.

HARRINGTON, NEIL J. (1948)----------------------------Instructor in Chemistry
B.S., Monmouth College; one year of graduate study at DePaul University and Northwestern University.

HARRIS, VINCENT C. (1950)----------------Assistant Professor of Mathematics
B.A., M.A., Ph.D., Northwestern University.

HARTIGAN, SELWYN C. (1946)--------------------------------Business Manager
A.B., San Diego State College.

HARVEY, A. R. (1949)--------------------------Assistant Professor of Mathematics
B.S., Bates College; A.M., Ph.D., Harvard University.

HARVEY, DOROTHY R. (Mrs. F. A.) (1924)----------Assistant Professor of Botany
A.B., San Diego State College; M.A., University of Southern California. One year graduate study at University of Southern California and University of Chicago.

HARWOOD, ROBERT DANIEL (1928)----------Chairman, Division of Life Science; Professor of Zoology
A.B., Pomona College; Ph.D., Cornell University.

HASKELL, HARRIET (1940, except 1943-45)---------Associate Professor of English
A.B., Mills College; M.A., Bryn Mawr College; Ph.D., University of Wisconsin.

HAYNES, GERALDINE K. (Mrs. L.) (1931)----------------------Senior Librarian
A.B., Indiana Central College; B.S. in L.S., University of Illinois.

HAYS, MAHELA W. (1946-47 and 1952)--------------------Lecturer in Psychology
B.S., Ph.D., University of California.

HAYS, MARTHA F. (1952)----------------------------------Lecturer in Education
A.B., San Diego State College.

HODGSON, FRANK M. (1953)--------------------Assistant Professor of Education
B.A., University of California at Santa Barbara; M.S. and graduate study at University of Southern California.

HOLMES, DARRELL C. (1952)------Assistant Professor of Education and Psychology
B.A., M.A., Ph.D., Ohio State University.

HOUSEMAN, RICHARD A. (1948)--------------------------Professor of Education
B.S., Central Michigan College of Education; M.A., Ed.D., Teachers College, Columbia University.

HOUSER, LOWELL (1938)------------------------------Associate Professor of Art
Diploma, Chicago Art Institute. Five years' special study in Mexico, Yucatan, Haiti, and New York City.

HOWARD, FRANCIS J. (1950)----------------------------Instructor in Physics
A.B., University of California at Los Angeles; M.S., University of California (Scripps Institution of Oceanography).

HUGHES, DONALD H. (1950)--------------------Assistant Professor of Education
B.A., Hastings College; M.Ed.; Ph.D., University of Colorado.

HUNTER, JAMES J., JR. (1946)------------Executive Dean; Professor of Education
A.B., Cornell University; M.S., Ph.D., Syracuse University.

ISENSEE, ROBERT W. (1948)-------------------Associate Professor of Chemistry
A.B., Reed College; M.A., Ph.D., Oregon State College.

JACKSON, EVERETT GEE (1930)-----------------------------Professor of Art
A.B., San Diego State College; M.A., University of Southern California. Three years special study in Mexico.

JACOBSEN, HELEN M. (1946)---------------------------------Senior Librarian
A.B., San Diego State College; B.S. in L.S., University of California.

JOHNSON, FRANK LOUIS (1939)------------------Associate Professor of English
A.B., M.A., University of Minnesota; Ph.D., University of Wisconsin.

JONES, KENNETH K., JR. (1948)---------------Assistant Professor of Speech Arts
B.S., Northwestern University; M.A., Stanford University.

JOSEPH, LIONEL (1947)------------------------Associate Professor of Chemistry
B.S., St. Louis University; M.S., Ph.D., Washington University.

JULIAN, JAMES L. (1951)---------------Publications and Public Relations Officer; Lecturer in Journalism
B.S., B.A., University of Houston; M.A., University of Texas; graduate study at Universities of Iowa and Miami.

KALBFELL, DAVID C. (1948)--------------------Associate Professor of Physics
A.B., University of California at Los Angeles; M.A., Ph.D., University of California. Registered Electrical Engineer

KAPLAN, OSCAR J. (1946)-------------------------------Professor of Psychology
B.A., M.A., University of California at Los Angeles; Ph.D., University of California.

KASCH, FREDERICK W. (1948)---------Associate Professor of Physical Education
B.S., M.S., University of Illinois; graduate study at New York University and University of Illinois.

KEENEY, JOSEPH SUMNER (1933)------------------------Professor of English
A.B., Yale University; M.A., Ph.D., University of California.

KENNEDY, CHESTER B. (1937)------------------------------Professor of English
A.B., Chico State College; M.A., Ph.D., Stanford University.

KIDWELL, WILLIAM M. (1949)------------Placement Officer; Assistant Professor of Psychology
B.A., M.S., University of Oregon; Ed.D., Stanford University.

KINDER, JAMES S. (1953)-----------------Coordinator of Audio-Visual Services; Assistant Professor of Education
B.S., Southeast Missouri State College; M.A., Ph.D., Teachers College, Columbia University.

KITZINGER, ANGELA M. (1945)----------Associate Professor of Health Education
A.B., Barnard College, Columbia; M.A., Teachers College, Columbia University. Additional work at Central School of Hygiene and Physical Education and at Folk High School, Ollerup, Denmark.

KLAPP, ORRIN E. (1948)------------------------Associate Professor of Sociology
M.A., Ph.D., University of Chicago.

KOESTER, GEORGE A. (1950)--------------------Assistant Professor of Education
B.S., Midland College; M.A., University of Colorado; Ph.D., University of Minnesota.

LAMDEN, CHARLES W. (1946)----------Dean of Educational Services and Summer Sessions; Professor of Accounting and Business Management
A.B., M.A., University of California at Los Angeles; Ph.D., University of California. Certified Public Accountant.

LAURITSEN, WILLIAM H. (1947)-----------------Professor of Health Education
A.B., M.A., University of Nebraska; Ph.D., Ohio State University.

LEBARRON, EVANGELINE O. (Mrs. H. E.) (1946, except 1948-49)
Assistant Professor of Secretarial Management
B.A., B.S., University of Iowa; B.A., Sioux Falls College; one and one-half years graduate study at Claremont Colleges, Universities of Southern California, Minnesota and Hawaii.

LEIB, JULIUS (1938)--------------------------------Associate Professor of Music
Three years special study at Leipzig Conservatory.

LEIFFER, DONALD B. (1948)--------------Coordinator of Public Administration; Professor of Political Science
A.B., University of California at Los Angeles; M.A., Ph.D., Harvard University.

LEMME, MAURICE M. (1948)--------------------------Professor of Mathematics
A.B., Oakland College; M.A., Indiana University; Ph.D., Purdue University.

LEONARD, CHARLES B. (1921)------------------------------Professor of History
A.B., M.A., Ph.D., University of California.

LESLEY, LEWIS B. (1924)-----------------------------------Professor of History
A.B., Stanford University; M.A., Ph.D., University of California.

LINLEY, JAMES M. (1945)-----------------------Associate Professor of Education
Ph.B., University of Chicago; M.S., Ph.D., University of Southern California.

LOCKMAN, EVELYN (1948)------------Associate Professor of Physical Education
B.A., Vanderbilt University; M.A., George Peabody College; graduate study at New York University, and University of Wisconsin; three years special study in dance.

LUCE, LAWRENCE W. (1949)---------------Assistant Professor of Industrial Arts
B.S., Illinois Wesleyan University; M.S., Iowa State College.

LUCIO, WILLIAM H. (1939)-----------------Coordinator of Elementary Education
A.B., M.A., Ph.D., University of California. Professor of Education

* MADDEN, RICHARD (1939)---------------------Chairman of Graduate Studies; Professor of Education
A.B., Nebraska (Peru) State Teachers College; M. A., Ph.D., Columbia University.

MARCHAND, ERNEST L. (1946)----------------------------Professor of English
A.B., M.A., University of Washington; Ph.D., University of Wisconsin.

MARKOWITZ, ABRAHAM (1952)--------------Assistant Professor of Bacteriology
B.A., New York University; M.S., Ph.D., University of Southern California.

McBLAIR, WILLIAM (1948)----------------------Assistant Professor of Zoology
A.B., San Diego State College; two years of graduate work at the University of California.

McCLINTIC, JOSEPH O. (1946)----------------------------Professor of Economics
A.B., Central College; A.M., University of Missouri; Ph.D., University of Wisconsin.

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* On leave Semester II.

McCOLLOM, IVAN N. (1946) Professor of Psychology
A.B., Central Washington College of Education; B.S., M.S., University of Oregon; Ed.D., Colorado State College of Education.

McLONEY, WIRT L. (1949) Assistant Professor of Physical Science
A.B., Western State College; M.A., Colorado State College of Education.

* MENDENHALL, MARY (1939) Dean of Women; Professor of Philosophy
B.A., University of Colorado; M.A., University of Southern California; Ph.D., Yale University.

MERRILL, JOHN E. (1946) Assistant Professor of History
A.B., Stanford University; A.M., Harvard University. Two years graduate study at Stanford University.

MERZBACHER, CLAUDE FELL (1947) Assistant Professor of Physical Science
B.S., University of Pennsylvania; M.A., Claremont Graduate School. Certificat d'Etudes Francaises. Licensed Professional Chemical Engineer.

MESSIER, LEONARD N. (1946) Associate Professor of French
A.B., San Diego State College; M.A., Ph.D., University of California.

MILNE, DAVID S. (1946) Professor of Sociology
A.B., University of California at Los Angeles; M.A., University of Southern California; Ph.D., University of Chicago.

MOE, CHESNEY R. (1931) Professor of Physics
A.B., M.A., Stanford University; Ph.D., University of Southern California. Registered Mechanical Engineer. On military leave, April, 1951.

MORGAN, CHARLES (1949) Assistant Professor of Engineering
M.E., Stevens Institute of Technology; M.S., University of California. Registered Professional Mechanical Engineer.

MULLIN, DONALD C. (1952) Assistant Professor of Speech Arts
B.A., M.A., University of Iowa.

MYERS, MABEL A. (1946) Professor of Bacteriology
A.B., M.A., Pomona College; Ph.D., Cornell University.

NASATIR, ABRAHAM PHINEAS (1928) Professor of History
A.B., M.A., Ph.D., University of California.

NICHOLS, AMBROSE R., JR. (1939) Professor of Chemistry
B.S., University of California; Ph.D., University of Wisconsin.

NIEBAUER, RUBY R. (1949) Assistant Professor of Education
B.S., M.S., University of Wisconsin.

NORLAND, CALVERT E. (1947) Assistant Professor of Zoology
A.B., Pomona College; M.S., University of California. Graduate study at Claremont Colleges.

NUTTALL, EDMUND C. (1953) Instructor in Speech Arts
A.B., San Diego State College; M.A., University of Southern California.

ODMARK, VERNIE E. (1952) Assistant Professor of Accounting
B.S., St. Cloud State Teachers College; M.A., University of Minnesota; Ph.D., University of Missouri.

OLSON, ANDREW C., JR. (1946) Assistant Professor of Zoology
A.B., San Diego State College; M. S., University of Idaho; graduate study at Oregon State College.

OSBORN, CLARENCE G. (1928-29 and 1937) Professor of History and Political Science
A.B., A. M., Ph.D., Stanford University.

PARKER, MARION L. (1951) Registrar
A.B., San Diego State College; M.A., University of Southern California.

PASCOE, DAVID D., JR. (1952) Assistant Professor of Education
B.A., M.Ed. and graduate study at University of California at Los Angeles.

PEIFFER, HERBERT C., JR. (1937) Dean of Students
Professor of Psychology and Guidance
A.B., University of California at Los Angeles; M.A., Ph.D., Stanford University.

PEREZ, ROSE MARIE (1948) Junior Librarian
A.B., San Diego State College; B.S. in L.S., University of Southern California; M.A., University of Chicago.

PERRY, FAY V. (Mrs. J. M.) (1936) Coordinator of Guidance for Provisional Students; Professor of Sociology
A.B., San Diego State College; M.A., Ed.D., University of Southern California.

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* On leave.

PETERSON, CHARLES E. (1921) ______ Dean of Men; Professor of Physical Education
A.B., San Diego State College; M.A., Claremont Colleges.

PFAFF, PAUL LEWIS (1931) ________________ Associate Professor of Speech Arts
A.B., Stanford University; M.A. and two years graduate study at the University of Southern California.

PHILLIPS, GEORGE L. (1947) ____________________ Associate Professor of English
A.B., Dartmouth College; M.A., Harvard University; Ph.D., Boston University.

PHILLIPS, KENNETH (1950) ________________ Associate Professor of Industrial Arts
B.S., State College for Teachers (Buffalo); M.A., Ph.D., Ohio State University.

PHILLIPS, WALTER THOMAS (1927) ______________________ Professor of Spanish
A.B., University of Washington; M.A., Stanford University; Ph.D., University of Southern California.

POST, LAUREN CHESTER (1937) _________________________ Professor of Geography
A.B., M.A., Ph.D., University of California.

POVENMIRE, E. KINGSLEY (1946) ____________ Associate Professor of Speech Arts
B.S., Ohio State University; M.F.A., Yale University.

PRESTON, DUDLEY A. (1948) _____________________ Assistant Professor of Botany
B.S., Washington State College; M.S., Ph.D., University of Minnesota.

PROUTY, HELEN L. (1950) ______________________ Assistant Professor of Education
B.S., University of Nebraska; M.A., Ph.D., University of California.

RAGEN, KATHERINE M. (1947) ________________ Acting Dean of Women; Associate Professor of History
A.B., Penn College; M.A., Bryn Mawr College; Ph.D., University of Wisconsin.

RANDALL, EDWARD W. (1952) ________________ Assistant Professor of History
B.A., San Diego State College; M.A., Claremont College; graduate study at University of Wisconsin and Claremont College.

RICHARDSON, M. BRUCE (1948) ______________ Associate Professor of Engineering
A.B., Aeronautical Engineer, Stanford University. Registered Mechanical Engineer.

RICHARDSON, ROBERT W. (1939, except 1946-48) _____ Chairman, Division of Social Sciences; Professor of Geography
A.B., Ph.D., University of California.

RIDOUT, LIONEL U. (1946, except 1949-50) ________ Assistant Professor of History
A.B., San Diego State College; M.A., University of California; Ph.D., University of Southern California.

RIGGS, LESTER G. (1950, except 1951-52) ________ Assistant Professor of Mathematics
B.S., University of Illinois; M.S., Syracuse University; Ph.D., Northwestern University.

ROBERTS, ELLIS E. (1949) _______________________ Assistant Professor of Geology
B.S., Michigan College of Mining and Technology; M.S., California Institute of Technology; Ph.D., Stanford University.

ROBINSON, DUDLEY HUGH (1928) ________ Chairman, Division of Physical Science; Professor of Chemistry
B.S., Louisiana State University; M.S., State University of Iowa; Ph.D., University of Southern California. Registered Chemical Engineer.

ROGERS, SPENCER LEE (1930) ______________________ Professor of Anthropology
A.B., San Diego State College; M.A., Claremont Colleges; Ph.D., University of Southern California.

ROHFLEISCH, KRAMER J. (1947) ___________________________ Professor of History
A.B., M.A., Ph.D., University of California.

ROST, NORMAN (1951) _______________________________________ Lecturer in Music
B.M., University of Michigan.

ROWE, ROBERT D. (1946) _________________________________ Professor of Chemistry
A.B., Ph.D., Stanford University.

RUJA, HARRY (1947) ____________ Assistant Professor of Philosophy and Psychology
A.B., University of California at Los Angeles; M.A., University of Chicago; Ph.D., Princeton University; one year postdoctoral study at the University of California at Los Angeles.

RUOCCO, ILSE H. (Mrs. L.) (1934) ______________________ Associate Professor of Art
B.E., University of California at Los Angeles; M.A., Columbia University.

RYAN, FREDERICK L. (1946) ____________________________ Professor of Economics
B.S., Tufts College; Ph.D., University of California.

SAMPLES, HOWELL GORDON, JR. (1950) ______________________ Junior Librarian
A.B., University of Georgia; B.S. in L.S., George Peabody College for Teachers.

SCHALLES, FRANCES IRENE (1950) ........ Junior Librarian
A.B., San Diego State College. One year graduate study.

SCHRUPP, MANFRED H. (1948) ........ Chairman, Division of Education; Associate Professor of Education
B.S., M.Ed., Ph.D., University of Minnesota.

SCHUNERT, JIM R. (1948) ........ Coordinator of Secondary Education; Associate Professor of Education
B.S., M.A., Ph.D., University of Minnesota.

SCHUTTE, WILLIAM H. (1947) ........ Assistant Professor of Physical Education
B.S., University of Idaho; M.S., University of Southern California.

SCHWOB, MARION L. (Mrs. W. E.) (1934) ........ Associate Professor of Physical Education
B.A., State University of Iowa; M.S., University of Southern California.

SCOTT, FRANK L. (1947) ........ Associate Professor of Physical Education
A.B., Grinnell College; M. A., University of Michigan; additional study at the University of Michigan.

SCOTT, HELEN M. (1950) ........ Instructor in Education
A.B., M.A., Colorado State College of Education.

SELLMAN, HUNTON D. (1946) ........ Professor of Speech Arts
B.S., Purdue University; M.S., University of Arizona. Three and one-half years graduate study at University of California, University of North Carolina and Yale University.

SHANNON, FLORENCE S. (Mrs. E. L.) (1933)
Assistant Professor of Physical Education
A.B., University of California; M.S., University of Southern California.

SHIELDS, ALLEN E. (1949) ........ Assistant Professor of Philosophy
A.B., University of California; M.A., Ph.D., University of Southern California

SHOUSE, CLAUDE F. (1946) ........ Assistant Professor of English
A.B., Georgetown College; M.A., University of Kentucky; Ph.D., University of Southern California.

* SILVERNAIL, CHESTER J. (1949) ........ Assistant Professor of Astronomy
A.B., San Diego State College; M.A., Claremont Graduate School.

SKOLIL, LESTER L. (1951) ........ Assistant Professor of Physics
A.B., Doane College; M.A., University of Nebraska; Ph.D., University of California.

SMITH, CHARLES ROBERTS (1933) ........ Coordinator of Athletics; Assistant Professor of Physical Education
A.B., San Diego State College; M.S., University of Southern California.

SMITH, CLIFFORD EDWARD (1937) ........ Professor of Astronomy
A.B., Carleton College; M.A., Swarthmore College; Ph.D., University of California.

SMITH, DEANE FRANKLIN (1939) ........ Associate Professor of Music
B.M., M.M., Northwestern University.

SMITH, LOUIS E., JR. (1946) ........ Professor of Physics
A.B., San Diego State College; Ph.D., University of Washington.

SORENSON, GEORGE N. (1946) ........ Chairman, Division of Fine Arts; Associate Professor of Art
A.B., San Diego State College; M.A., University of Southern California; graduate study at University of California and University of Minnesota.

SPANGLER, JOHN A. (1946) ........ Associate Professor of Chemistry
A.B., Ph.D., West Virginia University. On military leave, June, 1952.

SPORTSMAN, CHARLES C. (1947) ........ Associate Professor of Physical Education
B.S., North Texas State College; M.S., and one year additional study at the University of Southern California.

SPRINGSTON, CHRISTINE (1930) ........ Associate Professor of Music
B.A., B.M., University of Redlands; M.A., University of Washington, Diplomée d'execution, Conservatoire Americain, Fontainebleau, France.

STEINMETZ, HARRY C. (1930) ........ Associate Professor of Psychology
A.B., University of California; M.A., University of Southern California; Ph.D., Purdue University.

STONE, HAMILTON L. (1947) ........ Assistant Professor of Engineering
B.S., U. S. Naval Academy. Two and one-half years of graduate study. Registered Mechanical Engineer.

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* On leave.

STONE, JOHN PAUL (1930)----------Head Librarian; Professor of Library Science
B.S., Northwest Missouri State Teachers College; B.S., M.S., University of Illinois; Ph.D., University of Chicago.

STORM, ALVENA (Mrs. Eugene) (1926)----------Associate Professor of Geography
A.B., M.A., University of California.

STOUGH, MORROW F. (1950)--------------------Assistant Professor of Education
A.B., Wittenberg College; M.A., University of Pennsylvania; Ph.D., University of California.

STOVALL, HARRIET B. (Mrs. S. L.) (1925)----------------------Senior Librarian
Graduate, Berkshire Athenaeum, Massachusetts.

STRAUB, LURA LYNN (1948)-------Assistant Professor of Secretarial Management
A.B., Jamestown College; M.C.S., Indiana University; graduate study at University of Wyoming and University of Denver.

SUTTON, JOSEPHINE M. (1947)--------------------------------Junior Librarian
A.B., University of Oklahoma.

SWIGGETT, JEAN D. (1946)---------------------------Associate Professor of Art
A.B., San Diego State College; M.F.A., University of Southern California; graduate study at Claremont Colleges.

TALBOY, RUTH A. (1947)-----------------Assistant Professor of Home Economics
B.S., Iowa State College; M.A., Stanford University; graduate study at Universities of Minnesota, Iowa, and California.

TAYLOR, JAMES W. (1950)----------------------Assistant Professor of Geography
A.B., Northwestern State College; M.A., Louisiana State University.

TAYLOR, KENNETH M. (1949)--------------------Assistant Professor of Zoology
A.B., M.A., Ph.D., University of California.

TAYLOR, MERREL A. (1946)---------------------Assistant Professor of Zoology
A.B., Indiana University; B.S., M.S., University of Michigan.

TERHUNE, JOHN A. (1947)-----------------------------------Lecturer in Physics
B.S., U. S. Naval Academy; M.S., Harvard University.

TERRY, WILLIAM L. (1946)----------Chairman, Division of Health, Recreation, and Physical Education; Lecturer in Physical Education
A.B., Western Kentucky Teachers College; M.S., Indiana University; two years of additional study at University of Kentucky, University of Illinois, and Columbia University.

* THEOBALD, JOHN R. (1946)--------------------------------Professor of English
B.A., St. Catherine's College, Oxford University; M.A., Mansfield College, Oxford University; Ph.D., University of Iowa.

TIDWELL, JAMES N. (1947)----------------------------------Professor of English
A.B., Simmons University; M.A., University of Oklahoma; Ph.D., Ohio State University.

TOLLEFSEN, DOROTHY J. (1946)-------Assistant Professor of Physical Education
A.B., M.A., University of California.

TORBERT, FRANCES B. (Mrs. H.) (1937)--------Associate Professor of Marketing
A.B., Stanford University; M.A., University of Southern California; one year graduate study at Stanford University.

TRAIL, MABEL COY (1935)---------------------------------Professor of English
A.B., Parsons College; M.A., State University of Iowa; Ph.D., University of Southern California.

TREAT, WOLCOTT C. (1950)------------------Assistant Professor of Psychology
A.B., Harvard College; A.M., Harvard University; Ph.D., Stanford University.

TUCKER, GORDON H. (1945)--------------------------------Professor of Zoology
B.S., M.S., University of South Carolina; Ph.D., University of North Carolina.

TURNER, MERLE B. (1950)-------------------Assistant Professor of Psychology
A.B., Willamette University; M.A., Stanford University; Ph.D., University of Colorado.

* VOEKS, VIRGINIA W. (1949)-----------------Assistant Professor of Psychology
B.S., M.S., University of Washington; Ph.D., Yale University.

WALBA, HAROLD (1949)-----------------------Assistant Professor of Chemistry
B.S., Massachusetts State College; Ph.D., University of California.

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* On leave Semester II.

WALKER, DONALD E. (1949) ---------- Assistant Professor of Sociology
A.B., M.Th., University of Southern California; two years graduate study at Stanford University.

WALLING, CURTIS R. (1931) ---------- Associate Professor of Engineering
A.B., E.E., Stanford University; one and one-half years of graduate study at Stanford University and the University of Southern California. Registered Electrical Engineer.

WATENPAUGH, FRANK M. (1935) ---------- Associate Professor of Accounting
A.B., Pomona College; M.A., University of Southern California. Two years graduate study at University of Southern California and University of Oregon. Public Accountant.

WATSON, DONALD R. (1939) ----- Dean of Instruction; Professor of Physical Science
A.B., B.S., A.M., Ed.D., University of Southern California.

WEBB, CHARLES R., JR. (1949) ---------- Assistant Professor of History
A.B., M.A., University of California; M.A., Ph.D., Harvard University.

WEST, EDNA A. (1948) ---------- Assistant Professor of Secretarial Management
B.A., Santa Barbara State College; M.A., Claremont Colleges; graduate study at Claremont Colleges, Columbia University and Oregon State College.

WHITE, ALFRED E. (1946) ---------- Admissions Officer; Coordinator of Educational Research; Associate Professor of Guidance
A.B., M.A., University of California; Ed.D., Stanford University.

WILCOX, ROBERT F. (1950) ---------- Assistant Professor of Political Science
A.B., M.A., Stanford University; M.A., Columbia University; Ph.D., Stanford University.

WIMER, ARTHUR C. (1950) ---------- Lecturer in Journalism
B.Lit., Columbia University; M.A., University of Iowa.

WOLF, ERNEST M. (1947) ---------- Assistant Professor of German and Spanish
Study at the Universities of Berlin, Paris, Muenster, Cambridge and Bonn. Ph.D., University of Bonn.

WRIGHT, JOHN S. (1952) ---------- Assistant Professor of Marketing
Ph.B., University of North Dakota; M.B.A., and graduate study at Ohio State University.

WRIGHT, WILLIAM H. (1921) ---------- Chairman, Division of Business; Professor of Accounting and Business Management
B.S., M.A., University of California; Ph.D., University of Southern California. Public Accountant.

ZIEGENFUSS, GEORGE (1948) ---------- Associate Professor of Physical Education
B.A., University of Washington; M.A., Ed.D., Teachers College, Columbia University.

## LECTURERS

BACK, GILBERT (1950) ---------- Lecturer in Music
Professional musician.

BAKER, ROSS A. (1952) ---------- Lecturer in Chemistry
Ph.D., University of Wisconsin.

BURDICK, HUNTINGTON (1951) ---------- Lecturer in Music
Professional musician.

BURGERT, ROBERT H. (1948) ---------- Lecturer in Education
San Diego City Schools.

CARNEGIE, JANE H. (1953) ---------- Lecturer in Sociology
San Diego County Department of Public Welfare.

CARTER, DAVID (1953) ---------- Lecturer in Physics
Consolidated Vultee Aircraft Corporation.

CLARK, HELEN S. (1952) ---------- Lecturer in Mathematics
B.A., Macalester College.

COMIN, NORITA N. (1949) ---------- Lecturer in Home Economics
B.S., University of Minnesota.

DE JULIEN, LORENZ F. (1949) ---------- Lecturer in Marketing
Self employed.

FRAZIER, MARTIN E. (1953) ---------- Lecturer in Accounting
Security Trust and Savings Bank.

GOODWIN, JOHN H. (1947) ---------- Lecturer in Insurance
Insurance broker.

| | |
|---|---|
| HINES, WILLIAM H. (1952)<br>The Traveler's Insurance Company. | Lecturer in Insurance |
| HUFF, GEORGE D., M.D. (1939)<br>Practicing physician. | Lecturer in Health and Hygiene |
| INGRUM, ROBERT G. (1952)<br>San Diego City Schools. | Lecturer in Education |
| KARPINSKI, CHARLES E. (1953)<br>Attorney at Law. | Lecturer in Commercial Law |
| KOEPPE, CLARENCE E. (1948)<br>Ph.D., Clark University. | Lecturer in Geography |
| LINDSLEY, BYRON F. (1947)<br>Attorney at Law. | Lecturer in Commercial Law |
| McHUGH, WILLIAM B. (1953)<br>B.S., U. S. Naval Academy. | Lecturer in English |
| MULLENIX, CARLOS W. (1950)<br>Professional musician. | Lecturer in Music |
| ROEMMICH, HERMAN (1953)<br>Navy Electronics Laboratory. | Lecturer in Education |
| SCHMOCK, JOYCE C. (1952)<br>San Diego County Schools. | Lecturer in Education |
| SHANNON, JOHN R. (1952)<br>Ph.D., Indiana University. | Lecturer in Education |
| SILBERMAN, RICHARD T. (1952)<br>Consolidated Vultee Aircraft Corporation. | Lecturer in Physics |
| STANIFORTH, ROBERT O. (1948)<br>Swing & Scharnikow, Attorneys. | Lecturer in Commercial Law |
| SYLVESTER, HELEN K.<br>Principal, Euclid School. A.B., San Diego State College. | Lecturer in Education |
| TROGE, RALPH F.<br>Principal, Woodrow Wilson Junior High School. Ed.D., University of Oregon. | Lecturer in Education |
| WELLS, HOWARD H. (1952)<br>Professional musician. | Lecturer in Music |
| WEST, JAMES H. (1952)<br>Public Accountant. | Lecturer in Accounting |

## RETIRED FACULTY

(Date following name indicates date of retirement)

| | |
|---|---|
| HARDY, EDWARD L. (1935) | President Emeritus |
| HEPNER, WALTER R. (1952) | President Emeritus |
| AULT, JESSE W. (1948) | Dean of Education; Professor of Education |
| BAIRD, OSCAR (1951) | Professor of Physics |
| BLAKE, DEAN (1952) | Lecturer in Meteorology |
| DICKHAUT, FLORENCE SMITH (1952) | Professor of English |
| HAMMACK, EDITH CHASTAIN (1950) | Associate Professor of Education |
| JOHNSON, MYRTLE (1946) | Professor of Biology |
| LIVINGSTON, GEORGE R. (1949) | Professor of Mathematics |
| MOLITOR, VINNIE CLARK (1938) | Associate Professor of Geography |
| SKILLING, W. T. (1936) | Professor of Astronomy |
| SMITH, LEILA DEBORAH (1948) | Professor of Music |
| TANNER, JESSIE R. (1936) | Associate Professor of Physical Education |
| WALKER, HILDE KRAMER (1951) | Assistant Professor of German |

## MEDICAL STAFF*

| | |
|---|---|
| HAROLD G. CARTER, M.D. | Physician |
| HARNEY M. CORDUA, M.D. | Physician |
| O. S. HARBAUGH, M.D. | Physician |
| ROBERT B. PAPPENFORT, M.D. | Physician |
| JAMES R. PHALEN, M.D. | Physician |
| CHARLES E. PRUETT, M.D. | Physician |
| FRANCES M. WHITE, M.D. | Physician |
| IONA C. BARRETT, R.N. | Nurse |
| ORA G. BURTON, R.N. | Nurse |
| MARILYNN M. FENWICK, P.H.N. | Nurse |

## MAINTENANCE STAFF

| | |
|---|---|
| TIMOTHY HALLAHAN, A.B. | Chief of Maintenance |
| CAREY D. FOLGER | Supervisor of Building Trades |
| FLOYD A. KIRKPATRICK | Supervising Custodian |
| STEPHEN W. REED | Supervising Groundsman |
| WALTER J. SMITH | Electrician |
| KENNETH C. TAYLOR | Stationary Engineer |

## ASSISTANT INSTRUCTORS

| | |
|---|---|
| CLANCY, MALCOLM M. (1953)<br>B.S., University of California at Los Angeles. | Assistant in Chemistry |
| EMBLEN, DONALD E. (1953)<br>B.S., San Diego State College. | Assistant in English |
| GILKEY, POLLY L. (1952)<br>A.B., San Diego State College. | Assistant in Bacteriology |
| KRAMER, JEANETTE A. (1953)<br>A.B., University of Nebraska. | Assistant in English |
| PARKER, IRVING W. (1952)<br>A.B., San Diego State College. | Assistant in English |
| PONSFORD, ROBERT E. (1953)<br>B.S., San Diego State College. | Assistant in Chemistry |
| WILLIAMS, CURTIS E. (1951)<br>A.B., San Diego State College. | Assistant in Zoology |

## DIVISION OF AIR SCIENCE AND TACTICS

| | |
|---|---|
| MOSSE, CHARLES E., LT. COL. (1951) | Chairman, Division of Air Science and Tactics; Commanding Officer and Professor of Air Science and Tactics |
| MONACO, JOHN, JR., LT. COL. (1952) | Assistant Professor of Air Science and Tactics |
| KEHRER, KENNETH, MAJOR (1951) | Assistant Professor of Air Science and Tactics |
| SEELY, FRANK R., MAJOR (1952) | Assistant Professor of Air Science and Tactics |
| STROMBERGER, HERMAN G., MAJOR (1951) | Assistant Professor of Air Science and Tactics |
| LEWIS, WILLIAM M., CAPTAIN (1951) | Assistant Professor of Air Science and Tactics |
| DUPONT, FORREST R., 1ST LT. (1951) | Assistant Professor of Air Science and Tactics |
| HERTEL, FRITZ S., 1ST LT. (1951) | Assistant Professor of Air Science and Tactics |
| BLACKSTOCK, WILLIAM, JR., M/SGT. (1951) | NCOIC Supply |
| BOWMAN, WILLIAM L., S/SGT. (1952) | Training Aids |
| HAWBAKER, JAMES O., M/SGT. (1951) | Instructor |
| IVIE, FRANKLIN P., S/SGT. (1951) | Instructor (Asst. Supply NCO) |
| JOHNSTON, VIRGIL A., M/SGT. (1951) | Senior Clerk |
| KLEMETSON, HAROLD A., M/SGT. (1952) | Sgt. Major |
| MARTIN, HARRY G., M/SGT. (1952) | Cadet Records |
| SHORE, EUGENE C., M/SGT. (1952) | Cadet Records |

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* All physicians serving part-time.

## ADMINISTRATIVE OFFICE STAFF

| | |
|---|---|
| Sylvia R. Abegglen | Junior Stenographer-Clerk, Registrar's Office |
| Kathleen B. Anderson | Secretary to Dean of Instruction |
| Letha L. Baldwin | Senior Typist-Clerk, Library |
| Jane C. Bordner | Secretary, Supervisor of Buildings and Grounds |
| Joan M. Brockmiller | Secretary, Divisions of Business and Humanities |
| Deon R. Brokaw | Secretary to Dean of Students |
| Gwendolyn Chick, A.B. | Junior Typist-Clerk, Library |
| Ruby Chamberlain | Junior Clerk, Business Office |
| Loisene J. Copeland | Junior Clerk, Business Office |
| Evadne T. Deardorf | Assistant Registrar |
| Gertrude K. Dickinson | Supervising Clerk II, Business Office |
| Doris G. Ellsworth, A.B. | Secretary, Teacher Placement |
| Annie Fong | Clerical Assistant, Women's Physical Education Department |
| Berkeley A. Freeman | Assistant Secretary, Personnel Services |
| Maurine A. Gay | Junior Typist, Library |
| Ethel Mae Hallock | Senior Typist-Clerk, Library |
| Genevieve M. Hamblen | Secretary, Personnel Services |
| Elizabeth M. Harrison | Book Repair Clerk, Library |
| Alice M. Harvey | Intermediate Stenographer-Clerk, Instruction |
| Georgia C. Hochstetler, A.B. | Secretary, Campus Laboratory School |
| Helen M. Hoyle, A.B. | Intermediate Typist-Clerk, Business Office |
| Persis T. Hurlbut | Secretary, Audio-Visual Services |
| Irene Janeck, A.B. | Secretary, Physical Sciences Division |
| Jeanne L. Jones | Mimeograph Office |
| Pearl A. Koopmans | Secretary, Health, Physical Education and Recreation Division |
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